TEAC®

A-7010 GSL
A-7030 GSL

STEREO TAPE DECK

SERVICE MANUAL

A-7010GSL

A-7030GSL

TEAC CORPORATION	SALES OFFICE: SHINJUKU BLDG., 1-8-1, NISHI-SHINJUKU, TOKYO PHONE: (03) 343-5151
TEAC CORPORATION OF AMERICA	7733 TELEGRAPH ROAD, MONTEBELLO, CALIFORNIA 90640 PHONE: (213) 726-0303
TEAC TONBAND-ANLAGEN VERTRIEBS GmbH	6200 WIESBADEN-ERBENHEIM, EGERSTRASSE 2, WEST GERMANY PHONE: (06121) 74225-74228
TEAC HONGKONG LIMITED	ROOM NO. 1105 MELBOURNE PLAZA, 33 QUEEN'S ROAD, HONG KONG PHONE: 252027

PRINTED IN JAPAN 0874E 03·S0115

51031221 B

1. GENERAL DESCRIPTION

The TEAC A-7030GSL has a heavy duty transport mechanism; three motors, solenoid operated, four high density ferrite heads provided (erase, record, playback and reverse playback); dual system automatic reverse, phase sensing signal or foil operated; 10-1/2 inch reel capacity, reel size selector provides optimum tape tension.

The AR-70GSL preamplifier circuits use IC and silicon transistors. Independent circuits are provided for recording, monitoring, VU meter amplifier and playback functions. Electrical assembly provides two level bias selection for conventional and low noise/high out tapes, dual scale VU meter, meter level switch for optimum recording accuracy with any type recording tape; full MIC/LINE mixing capability with indivudual mic/line amplifiers and indivudual level controls.

The basic design of the A-7030GSL is highly similar to the preceding A-7030GSL model. The A-7030GSL is a professional tape deck offering operating speeds of 7-1/2ips and 15ips. Normal head configuration is two track record and playback with an extra four track playback head. Sensing foil operated automatic rewind or stop operation is included. Incorporates all electrical assembly feature of the A-7010GSL exception equalization is for 7-1/2ips and 15ips tape speed.

The service manual provides adjustment and alignment procedures, schematic diagrams and parts replacement information with the proper procedures for obtaining necessary repair parts.

If adjustments or repair procedures are not clear or seem difficult to accomplish or should you desire more detailed technical information, please contact your nearest TEAC dealer, TEAC Corporation or affiliated corporations, addresses of which are printed in this manual.

INDEX

1. GENERAL DESCRIPTION
2. SERVICE DATA
3. EQUIPMENT REQUIRED
4. PARTIAL DISASSEMBLY
5. HEAD MECHANICAL ALIGNMENT
6. MEASUREMENT AND ADJUSTMENT -MECHANICAL-
7. MEASUREMENT AND ADJUSTMENT -ELECTRICAL-
8. PREVENTIVE MAINTENANCE
9. TROUBLE SHOOTING CHART
10. SCHEMATIC DIAGRAM
11. PRINTED CIRCUIT BOARD AND PARTS LIST
12. EXPLODED VIEW AND PARTS LIST
13. WARRANTY AND PACKING FOR SHIPMENT
14. MANUAL CHANGE

2. SERVICE DATA

MECHANICAL

	A-7010GSL	A-7030GSL
FERRITE HEADS:	Four separate heads assembled in plug in unit. Erase; Four track 1.8kΩ/100kHz, erase current approx. 30mA Record; Four track 80Ω/1kHz, bias current approx. 3mA (signal 200μA) Forward/Reverse playback; Four track 1.6kΩ/1kHz -64dB/400Hz	Four separate heads assembled in plug in unit. Standard; two track erase two track record two track playback four track playback Erase; 1.8kΩ at 100kHz, Erase current approx. 35mA. Record; 85kΩ at 1kHz, Bias current approx. 3mA. Playback; 1.3kΩ at 1kHz -60dB/400Hz
DIODES	SIB01-02 ×2 SIB01-06 ×6	SIB01-02 ×2 SIB01-06 ×8
REEL SIZE:	10-1/2" maximum NAB reel	10-1/2" maximum NAB reel
TAPE WIDTH:	Standard 1/4inch tape	Standard 1/4inch tape
TAPE SPEED:	7-1/2ips and 3-3/4ips (0.5%)	15ips and 7-1/2ips (0.5%)
MOTORS:	One- 4/8 pole dual speed hysteresis synchronous motor for capstan drive. Two- Six pole eddy current motors for reel drive.	One- 4/8 pole dual speed hysteresis synchronous motor for capstan drive. Two- Six pole eddy current motors for reel drive.
FAST WINDING TIME:	Approx. 200 seconds for 3600ft 10" NAB reel	Approx. 200 seconds for 3600ft 10" NAB reel
WOW AND FLUTTER:	0.06% at 7-1/2ips 0.09% at 3-3/4ips	0.04% at 15ips 0.06% at 7-1/2ips
	Wow and flutter measured according to weighted NAB standard using TEAC flutter free tape.	
OPERATING POSITION:	Horizontal or vertical.	Horizontal or vertical.
POWER REQUIREMENT:	100/117/200/220/240V AC 50/60Hz 150W	100/117/200/220/240V AC 50/60Hz 150W
WEIGHT:	28kg (61.6 lbs)	28kg (61.6 lbs)

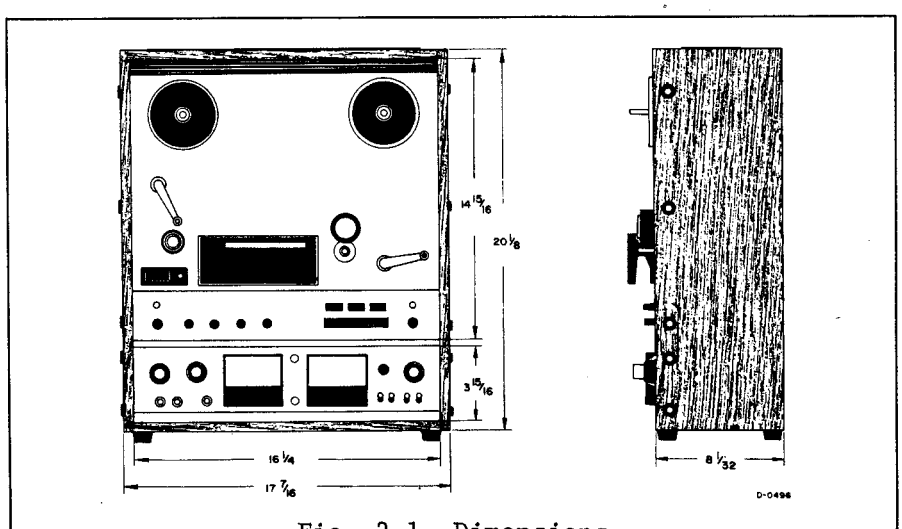


Fig. 2-1 Dimensions

ELECTRICAL

Transistors:	2SC1000BL ×2 2SC971 ×2 2SC536F ×2 2SD235 ×1 2SC693F ×2 2SA494Y (2SA666IS) ×2 2SA572YL4 (2SA666IS) ×2 2SC733Y (2SC828R) (2SC536F) ×7
IC:	TEAC 42709 (LD-3120) ×4 TEAC 42710 (LD-3141) ×2
Diodes:	SIB01-02 ×5, Zener, 02Z 6.2A ×1
Frequency Response:	Overall from recording INPUT to playback LINE OUT. Refer to frequency response limits.
Equalization:	NAB equalization 15ips, 7-1/2ips 50μsec. 3-3/4ips 90μsec.
Input:	MIC: 600Ω, 0.25mV LINE: 50,000Ω or more, 0.1V
Output:	LINE: 0.3V for load impedance of 10,000Ω or more. PHONES: 8Ω
Bias Frequency:	100kHz push-pull oscillator
Signal to Noise Ratio:	44dB or more at 3-3/4ips 46dB or more at 15, 7-1/2ips unweighted noise
Cross Talk Rejection:	Channel to channel at 1kHz/45dB or more Adjacent track at 125Hz/35dB
Erase Efficiency:	70dB or more at 7-1/2ips, 15ips(A-7030GSL)

These specifications are indispensible information and are required to service the equipment properly. They may differ slightly from those printed in the advertising brochures or the operation manual.

NOTE: As a result of continuing changes and improvements during the production run, minor differences may be found between early and later machines. Refer to manual change sheets for information concerning modifications.

3. EQUIPMENT REQUIRED

For proper adjustment and measurement, it is recommended that the following test equipment be available;

FOR MECHANICAL MEASUREMENT

SPRING SCALE:	0∿4 kilo-grams (0∿8 lbs) #5086025000 0∿300 grams (0∿10 oz) #5086026000
TEST TAPE:	TEAC YTT-2004 for 15ips TEAC YTT-2003 for 7-1/2ips TEAC YTT-2002 for 3-3/4ips
FLUTTER METER:	Meguro Model MK665B (preferred) or Sentinel FL-3D-1
DIGITAL FREQ. COUNTER:	Capable of 0 to 5kHz indication
TOOLS:	General, 2mm nut driver #5086014000 Hex head, Allen wrench #5086021000

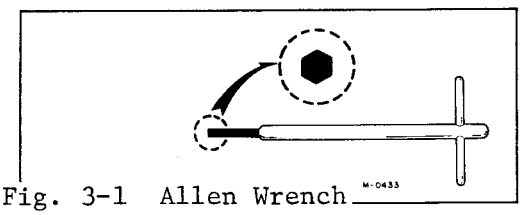


Fig. 3-1 Allen Wrench

FOR ELECTRICAL MEASUREMENT

TEST TAPE:	TEAC YTT-1004 for 15ips TEAC YTT-1003 for 7-1/2ips TEAC YTT-1002 for 3-3/4ips SCOTCH 203 and 150 for recording tests
EMPTY REEL	TEAC RE-702 (2" hub) TEAC RE-701 (4" hub) TEAC 10" reel
TEST SET:	TEAC M-826A test set
BAND PASS FILTER:	TEAC M-206A (1kHz)
AC/DC VTVM:	General purpose
RESISTOR:	Non inductive type 8Ω/1W
OSCILLOSCOPE:	General purpose

NOTE: Use of the TEAC M-826A test set is recommended. This set incorporates a LEVEL METER, Audio Oscillator, Channel Selecting Switch, Variable Attenuator, Monitor Speaker and Cables.

TEAC M-826A measures the RMS value of the Voltage (0dB=0.775V). Characteristics of this test set are similar to the standard VU-meter.

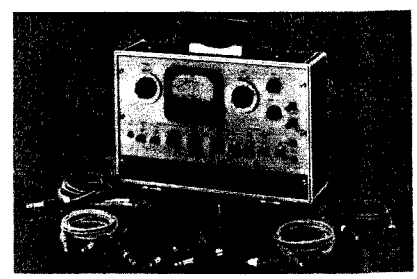


Fig. 3-1 TEAC Test Set M-826A

4. PARTIAL DISASSEMBLY

TAPE TRANSPORT REMOVAL

- Remove power cord and other connecting cords.
- Lay the equipment face down on a soft mat.
- Remove the two rear cover screws on the top of rear cover.
- Remove three upper screws on both sides of the case.
- Gently lift the case from the tape transport.

AMPLIFIER REMOVAL

- Remove two screws on both sides of the case.
- Slide the amplifier from case.

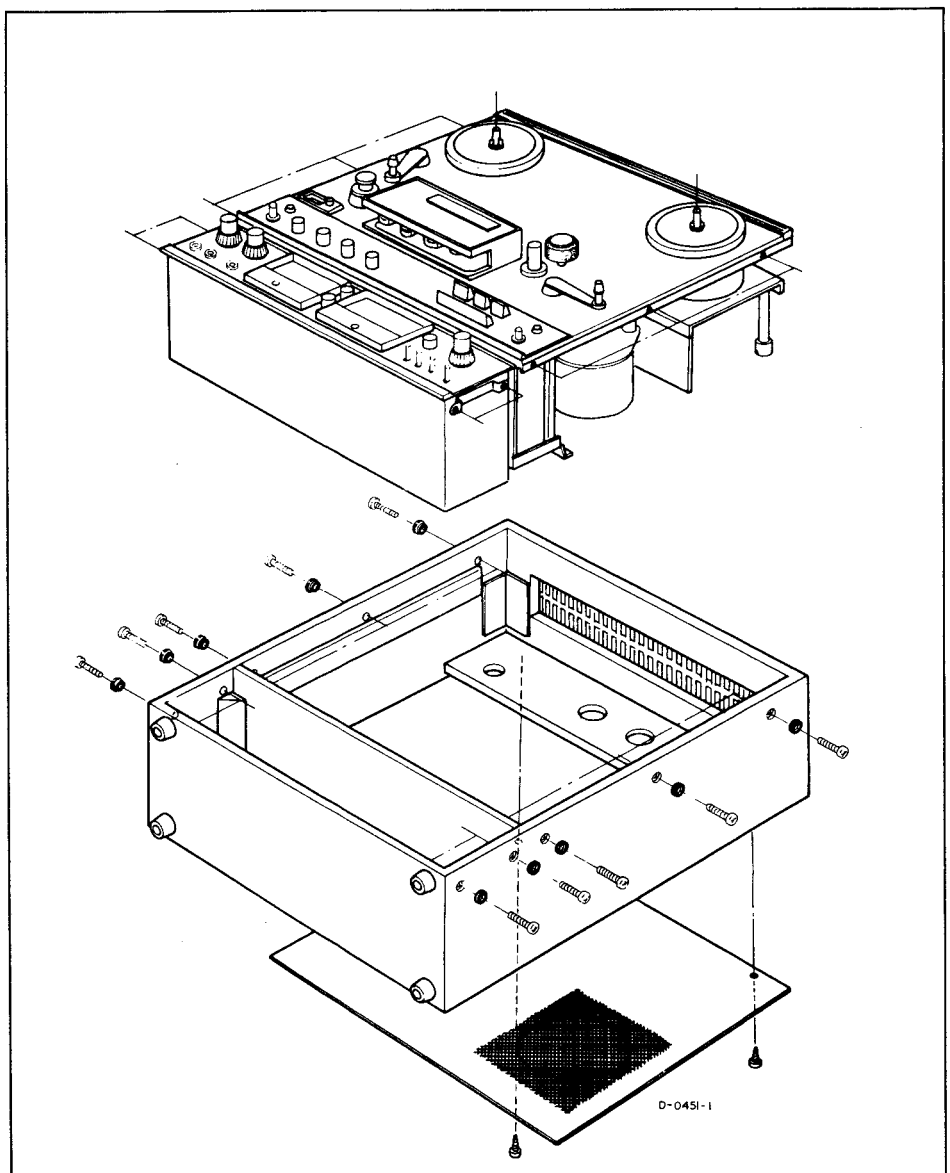


Fig. 4-1 Case Removal

LEFT TENSION ARM REPLACEMENT

- Unsolder two wires from terminal strip.
- Disconnect one end of the spring.
- Loosen allen screw and spring retaining pin then lift out tension arm.

  IMPORTANT: A special grease (MULTI DIA SS-10) must be applied during installation between the tension arm shaft and the bushing to maintain proper tension arm damping.

- To install, reverse the previous procedures.

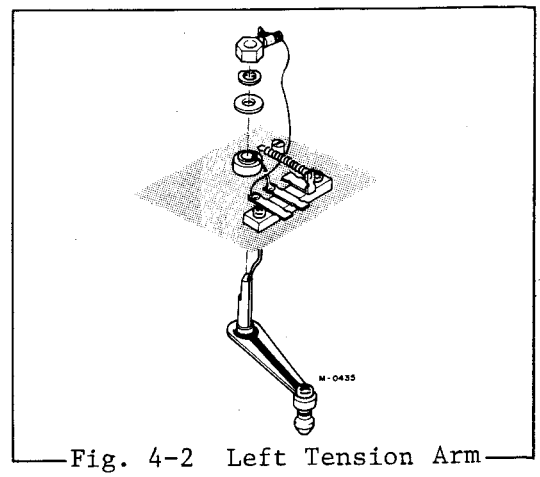


Fig. 4-2 Left Tension Arm

RIGHT TENSION ARM REPLACEMENT

- Disconnect one end of the spring.
- Loosen allen screw retaining the tension arm shaft, and gently lift out the tension arm.
- Apply "MORICOTE" (graphite-molybdenum based) to tension arm shaft and bushing during installation.
- After installation, check tension arm operation. It should operate freely and the thrust clearance should be minimum (secure but not binding).

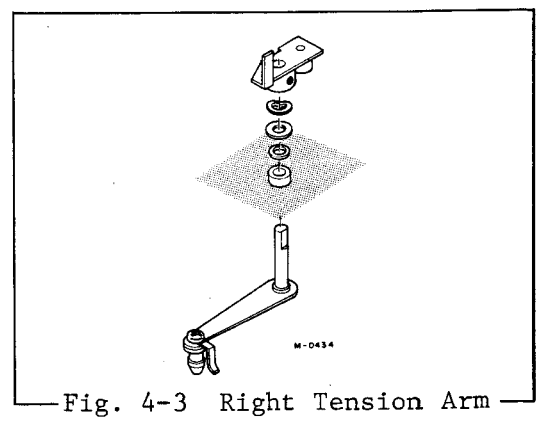


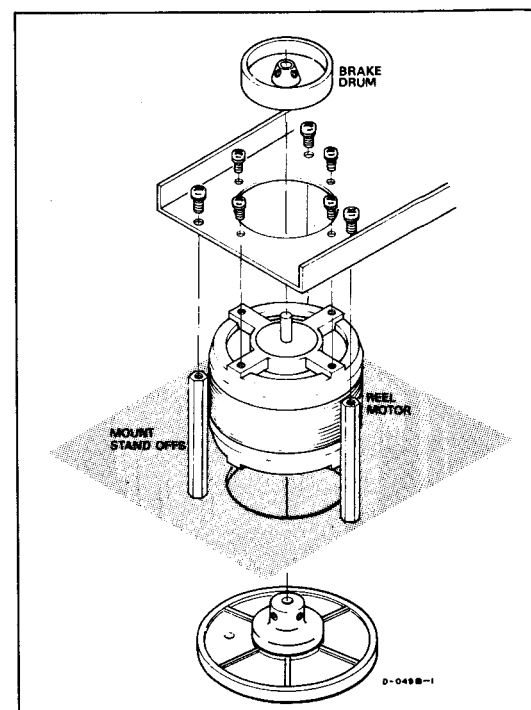
Fig. 4-3 Right Tension Arm

REEL MOTOR REPLACEMENT

- Use a special allen wrench (Fig.3-2). Access to the two reel table retaining screws is from the top of the unit (slots provided).
- Disconnect 34P connector from the reel motor assembly.
- Remove the reel motor assembly by removing four mounting screws.

  CAUTION: Extreme care must be taken not to damage PC board or relays when removing the reel motor assembly.

- Remove the brake drum after loosening the two allen screws on the motor shaft.
- Cut the four wires connecting the reel motor approx. 1" above the terminal.
- Remove the four screws mounting the motor.
- To reinstall reel motor, reverse above procedures. Use the wire remaining on the terminal for a guide in re-wiring the new motor.



CAUTION: While replacing, be careful not bend the brake bands. Do not get oil on the brake drum.

Fig. 4-4 Reel Motor

CAPSTAN ASSEMBLY REPLACEMENT

- Remove capstan dust cap on the front panel.
- Remove two screws mounting the thrust plate and pull away from the chassis.
- Remove capstan belt.
- Loosen two allen screws in the capstan flywheel and remove the flywheel.
- Remove three screws mounting the capstan assembly and lift the assy upward.
- Reverse the above procedures when installing the capstan assembly.
- During installation, apply a thin application of grease to the panel inside the thrust plate.

  CAUTION: A clearance of approx. 0.5mm must be maintained between the flywheel and capstan assembly.

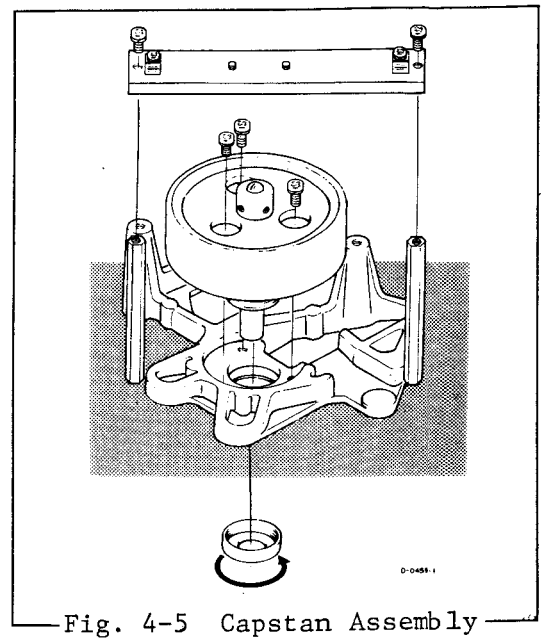


Fig. 4-5 Capstan Assembly

CAPSTAN MOTOR REPLACEMENT

- Remove the fan by loosening two hex screws.
- Remove the capstan belt, PC board and capstan pulley by loosening two hex set screws.
- Cut the six wires connecting the motor to the PC board.
- Remove the three slotted screws (studs bolt).
- Gently fold capstan motor assy and remove the four screws holding the motor on the pulley side. Then remove the four motors holding screws on the fan side.
- To reassemble, reverse the procedures.

  NOTE: After motor replacement, check position of capstan pulley on shaft for proper alignment with belt guide.

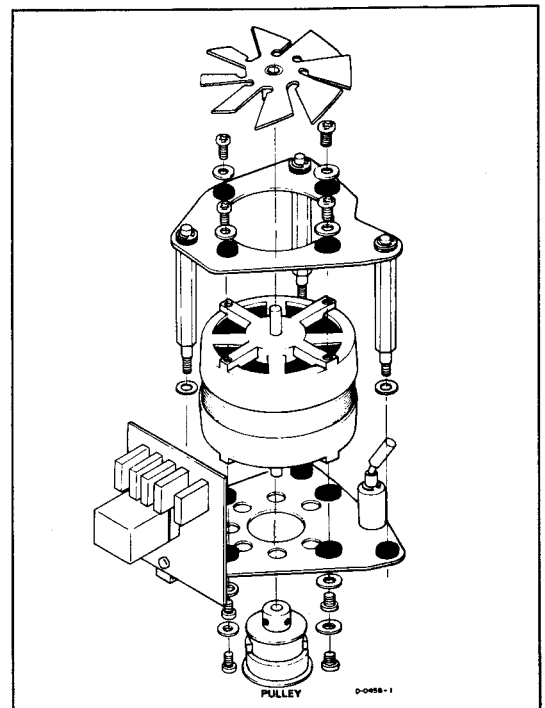
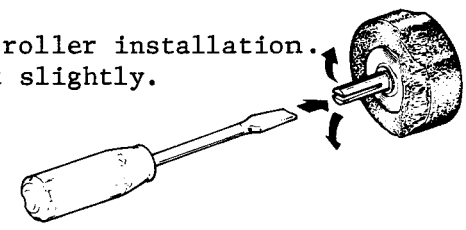


Fig. 4-6 Capstan Motor

Check for a firm, Secure pinch roller installation. If it is loose, spread the slot slightly.



HEAD REPLACEMENT

NOTE: Heads can be replaced individually or as a complete assembly. Azimuth adjustment (electronic) is not to be performed until all mechanical alignments have been performed. After replacing the heads, proceed to the next page for mechanical alignment.

CAUTION: All power must be removed from the unit when replacing heads to prevent transient pulses from passing through the heads. These may cause strong magnetization of the head material or damage the delicate winding.

HEAD ASSEMBLY REPLACEMENT

- Remove the head housing cover by loosening two hex screws on top of cover.
- Remove the four mounting screws indicated by the arrows in the diagram.
- Slide the assy out from the plug.
- Fit the original shielding plate onto the new head assy.
- Slide the new assembly onto the unit and secure the four screws.
- Proceed to the next page for mechanical alignment procedures.

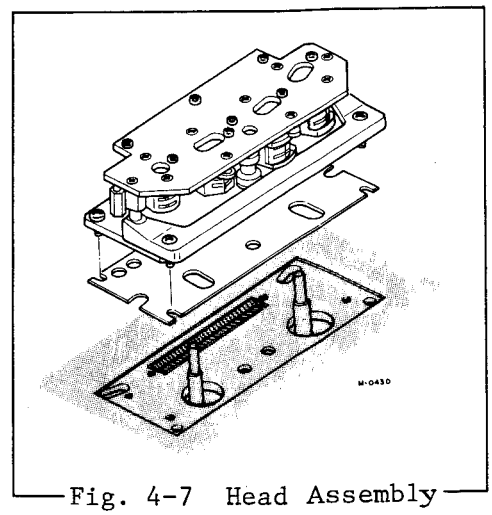


Fig. 4-7 Head Assembly

INDIVIDUAL HEAD REPLACEMENT

NOTE: All of the heads are indivudually mounted on the top base plate of the head assembly for easy accessibility and servicing.

- Remove head housing cover to expose head assy.
- To replace a single head, a special 2mm nut driver is required.
- Remove the two nuts on the defective head through the access hole provided to release the head from the mounting plate.
- Note the position of the head's wires on the circuit board and unsolder the defective head.
- **Using fig. 5-1 for reference, connect the new head to the circuit board.**
- Head installation mounting provides for either left or right positioning.
- Determine the proper position by adjusting the nuts to obtain a 90° angle between the tape and the head.
- Proceed to the next page for mechanical alignment procedures.

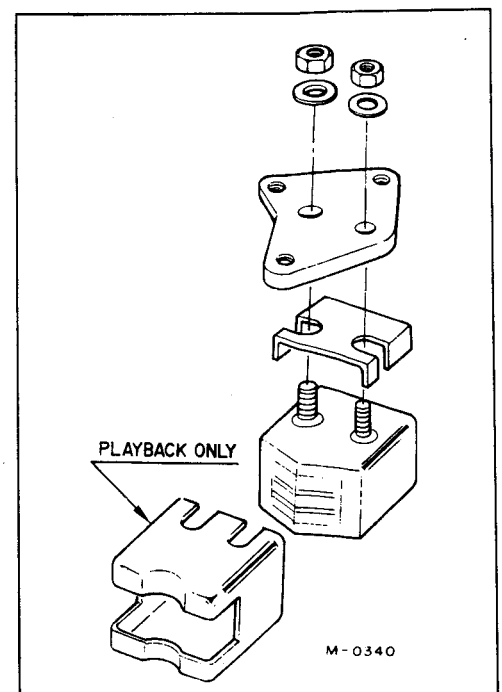


Fig. 4-8 Individual Head

5. HEAD MECHANICAL ALIGNMENT

NOTE: Head alignment is adjusted at the factory to very critical tolerances. Normally HEAD ASSEMBLY replacement will require only minor alignments or adjustments. Complete readjustment should only be necessary after an individual head is replaced. The adjustments are made as follows:

ERASE HEAD: The erase head pole should be above the edge of a threaded tape by the width of a heavy pencil line. Adjust the three screws indicated to obtain this height.

RECORD HEAD: The record head pole should be above the edge of a threaded tape by the width of a thin pencil line. Adjust the two screws indicated to obtain this height.

IMPORTANT: After completing the height adjustment make certain head surfaces are parallel with tape guide surfaces when viewed from the side.

PLAYBACK HEADS: The reverse playback head pole should be even with the bottom of the tape and the forward play head pole should be even with the top of the tape. Adjust the screws indicated.

NOTE: Refer to the figure below for locating the screws used in the preceding alignments. Azimuth adjustments are given in the section on MEASUREMENT AND ADJUSTMENT -ELECTRICAL-.

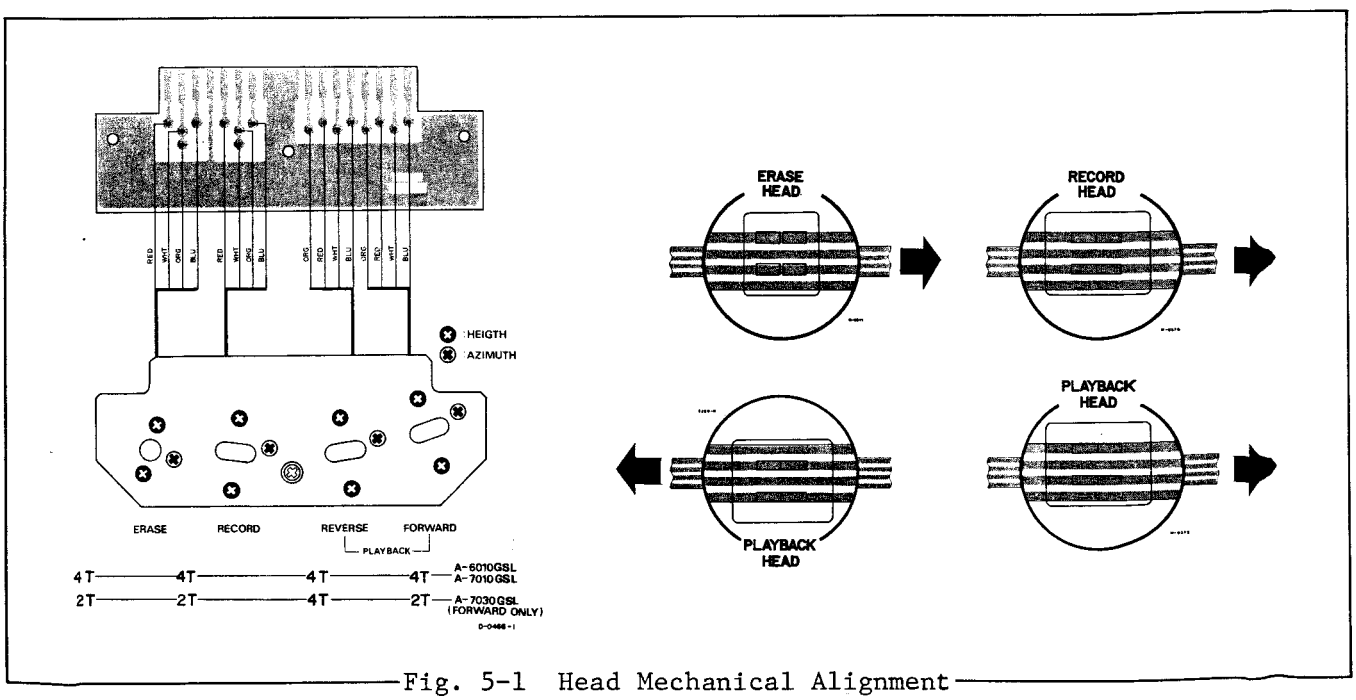
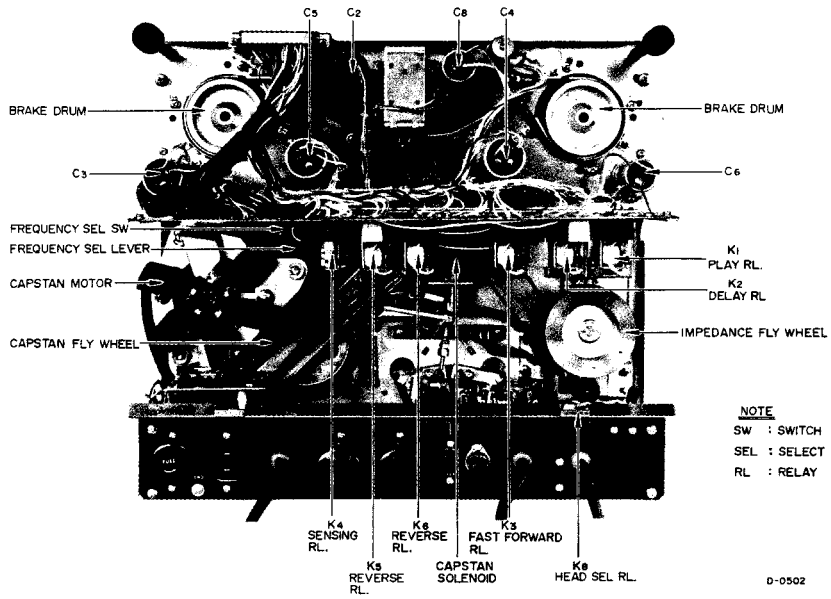


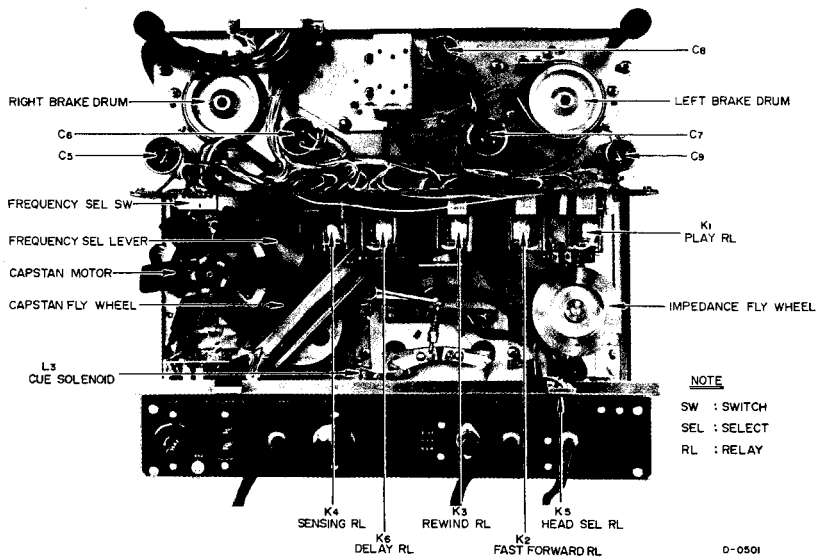
Fig. 5-1 Head Mechanical Alignment

TAPE TRANSPORT PARTS LOCATION

A-7010GSL -REAR-



A-7030GSL -REAR-



6. MEASUREMENT AND ADJUSTMENT
-MECHANICAL-

NOTE: The TEAC GSL series tape decks use a highly reliable three motor drive solenoid operated system and should require a minimum of mechanical maintenance or adjustment. These adjustments are made at the factory. Readjustment should only be required after many hours of operation or component replacement.

PINCH ROLLER PRESSURE MEASUREMENT

NOTE: Pinch roller pressure is supplied by pinch roller pressure spring only and it is therefore most important that the solenoid plunger has fully bottomed before taking pressure measurement.

- Block the automatic shut-off arm in the ON position.
- Attach a suitable spring scale to the pinch roller shaft.
- Place the unit in the play mode (▶) and holding the scale as illustrated, slowly draw it away from the pinch roller until the roller stops rotating.
- The spring scale should indicate 2.8∿3.1kg (6.6∿7.21bs).
- If adjustment is necessary, adjust the double nuts on the capstan solenoid plunger.

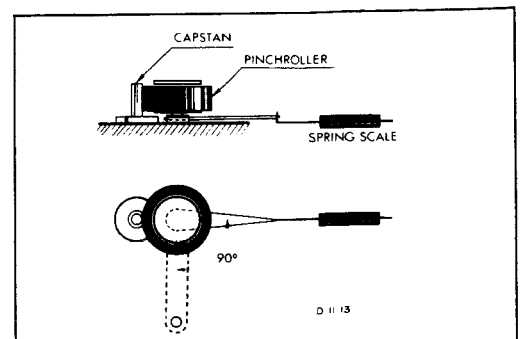


Fig. 6-1 Pressure Measurement

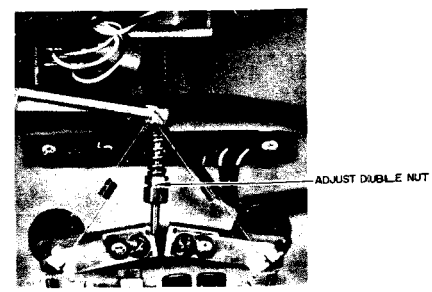


Fig. 6-2 Pressure Adjustment

FLUTTER & TAPE SPEED MEASUREMENT

Flutter and tape speed should be measured in playback mode using a TEAC flutter free tape YTT-2003·2002·2004. Connect test equipment to unit as shown in the figure. Measurement of flutter should be made in accordance with NAB standards. Values obtained with different standards or equipment cannot be compared.

Flutter should not exceed.

A-7010GSL	A-7030GSL
7-1/2ips : 0.06%	7-1/2ips : 0.06%
3-3/4ips : 0.09%	15ips : 0.04%

The tape speed should be measured using TEAC flutter free tape, model YTT-2003·2002. These tapes contain a highly accurate 3 kHz tone. The indicated frequency should be 2985 ∿3015 kHz for all speeds, both directions.

These figures apply to any tape position and direction (such as full take-up reel, full supply reel or about mid point).

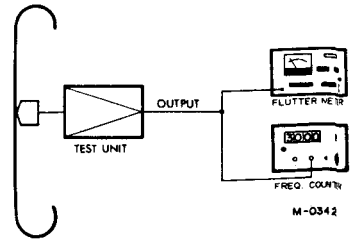


Fig. 6-3 Equipment Set-up

BACK TENSION

NOTE: Be sure the full required line voltage is applied and that the unit is set to the proper line frequency.

1. Block the shut-off arm in the ON position.
2. Place REEL SIZE switch to LARGE position.
3. Place an empty RE-701(10cm hub) and spring scale on left reel table.
4. Rotate the reel and wind several turns of string around the hub.
5. Place the unit in the (▶) play mode.
6. Pull the scale away from the reel against the motor torque, with a smooth steady motion.

The spring scale reading
A-7010GSL: 60∿66 grams (300∿330 g-cm)
A-7030GSL: 80∿88 grams (400∿440 g-cm)

Adjust slider tab B of R5 resistor.

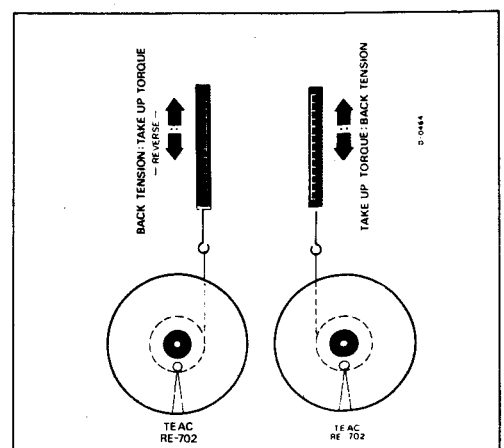


Fig. 6-4 Reel Motor Torque Measurement

Reverse Back Tension

The following procedures (step 7∿10) apply to the A-7010GSL only.

7. Place the empty reel and spring scale on right reel table.
8. Repeat above procedure steps 1,2,3,4 and 6. Press (◀) play button. .
9. The scale should read 80∿86 grams (400∿430 g-cm).
10. If proper tension is not present, adjust the slider B of resistor R4.

NOTE: No adjustment is provided for small reel size tension of A-7010GSL. (see partial circuit).

Small Reel Size Back Tension (applies to A-7030GSL only)

11. Set REEL SIZE switch to SMALL position.
12. Repeat steps 3,4,5 and 6 above, the scale should read 30∿32grams(150∿170g-cm).
13. If adjustment is necessary, adjust slider tab A of resistor R5.

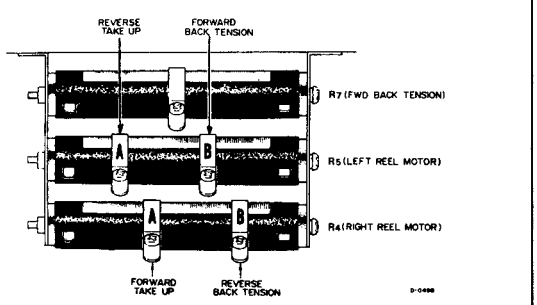


Fig. 6-5 Adjustment Resistor -A7010GSL-

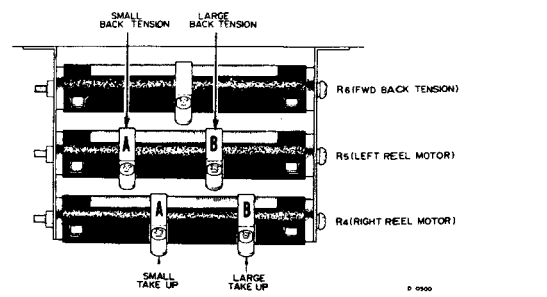


Fig. 6-6 Adjustment Resistor -A-7030GSL-

TAKE-UP TORQUE MEASUREMENT & ADJUSTMENT

1. Place the empty reel RE-701 and attached spring scale on the right reel table.
2. Set the REEL SIZE switch to LARGE position.
3. Place the unit in the (▶) play mode. Allow the rotation of the reel to slowly draw the scale toward the hub.
4. Hold the spring scale with enough force to allow a steady reading.

A-7010GSL: 160∿170 grams (800∿850 g-cm)
A-7030GSL: 200∿210 grams (1000∿1050 g-cm)

5. If adjustment is necessary, A-7010GSL: R4 slider tab A
   A-7030GSL: R4 slider tab B

Reverse Take-up Torque

The following steps (6∿9) are for the A-7010GSL only.

6. Place the empty reel RE-701 and spring scale on the left reel table.
7. Pressing (◀) play button, and allow the rotation of the reel to slowly draw the scale toward the hub.
8. The spring scale should read 160∿170 grams (800∿850 g-cm).
9. **If torque is incorrrect, adjust R5 resistor slider tab A.**

NOTE: Small reel size torque of A-7010GSL, no adjustment is provided.

Small Reel Size Take-up Torque (applies to A-7030GSL only)

10. Set REEL SIZE switch to SMALL position.
11. Repeat steps 3, 4 above. The scale should read 80∿86grams (400∿430g-cm). **If adjustment is necessary, slider tab B of R4 should be adjusted.**

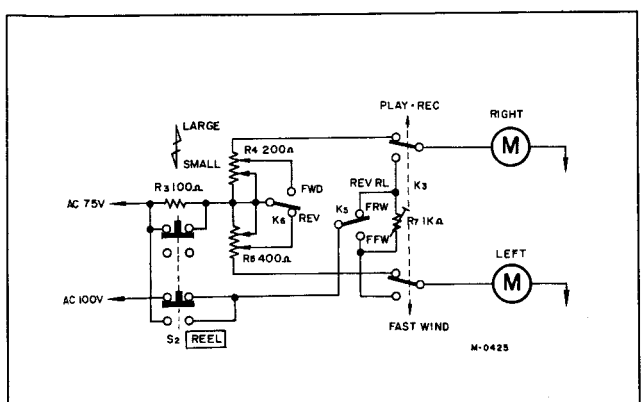


Fig. 6-7 Reel Motor Partial Circuit
-A-7010GSL-

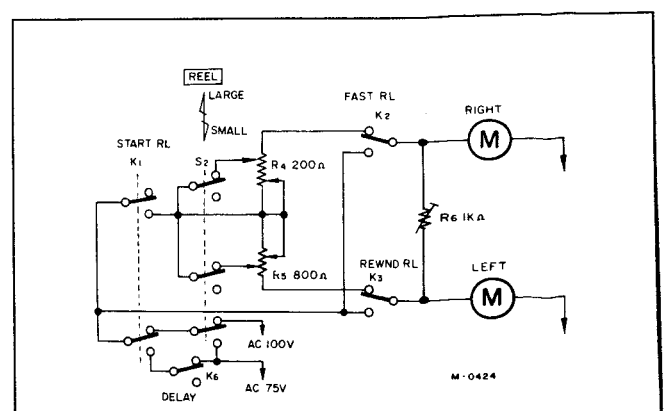


Fig. 6-8 Reel Motor Partial Circuit
-A-7030GSL-

FAST WIND BACK TENSION

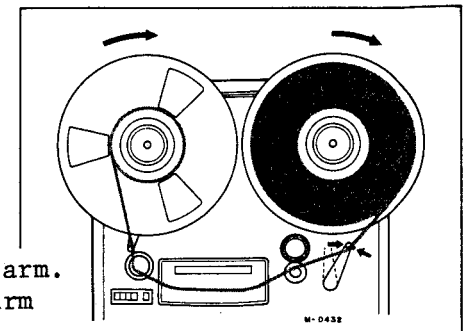


Fig. 6-9 Fast Wind Check

1. Load a full 3600 feet 10" reel of tape on the right reel table and an empty reel on left reel table and set the REEL SIZE switch to LARGE position.
2. Depress the (◀) and the FAST button simultaneously.
3. At this time observe the right tension arm. Adjust R7 (R6: A-7030GSL) so that the arm moves approximately 1" to the right and remains there.
4. Interchange the both reels, full reel on the right and empty reel on the left reel.
5. Repeat above step 2, the full reel should start rotating quickly and smoothly.
6. Repeat above procedure until the desired results are obtained.

BRAKE TORQUE MEASUREMENT & ADJUSTMENT

Brake adjustments are made with no power applied to the unit.

1. Place an empty 10cm(4") hub reel and spring scale on left reel table.
2. Wind several turns of string counter clockwise around the hub.
3. Pull the spring scale away from the reel. Take a reading only when the reel is in steady motion since the force required to overcome static friction will produce a false, excessively high initial reading.
4. The reading should be 350∿370 grams (1800 g-cm ±50 g-cm).
5. If adjustment is required, adjust the adjustable nut attached to the brake spring bolt for the proper brake torque.
6. To check and adjust the right reel brake repeat all steps as described for left reel with the exception that all directions of rotation are clockwise.

IMPORTANT: The difference in torque between the right and left brake should be kept within 10 grams (50 g-cm).

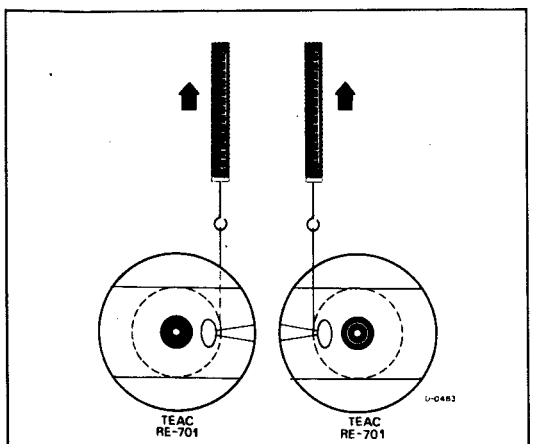


Fig. 6-10 Torque Measurement

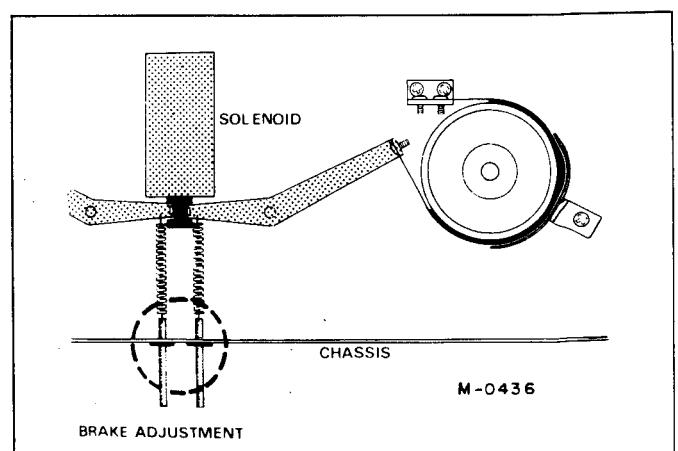


Fig. 6-11 Torque Adj. Location

7. MEASUREMENT AND ADJUSTMENT
-ELECTRICAL-

GENERAL NOTICE

Before performing any maintenance on this unit, all metal parts that the tape will come into contact with must be cleaned and demagnetized.

It is important that the unit is set for the proper voltage and frequency for your locality.

Standard test tapes and test equipment must be used when performing maintenance to insure reliable results.

Procedures for checks and adjustments, unless otherwise indicated, are for the left channel at 7-1/2ips. The same procedures are to be applied to the right channel and the other tape speeds.

All controls mentioned in this book will be printed in bold letters and will be exactly as they appear on the unit.

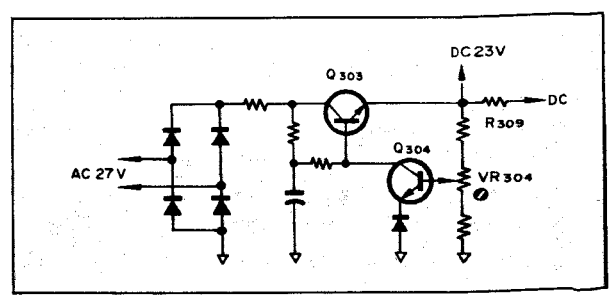
Double designated symbol numbers refer to left channel/right channel.

THD: Third harmonic distortion.

Value of "dB" in the test refer to 0 dB=0.775V, except where specified. If a Level Meter or an AC VTVM calibrated to 0 dB =1V is to be used, appropriate compensation should made.

POWER SUPPLY CIRCUIT CHECK

Measure DC voltage of rectifier circuit at R-309 for approximately 23 volts. If proper voltage is not present, adjust VR-304.



PLAYBACK PERFORMANCE

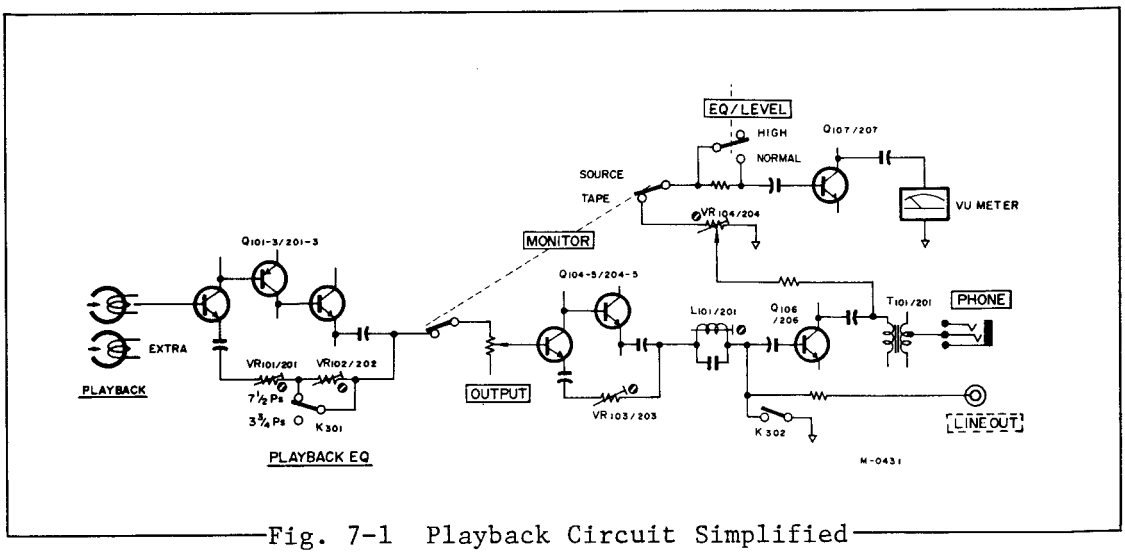


Fig. 7-1 Playback Circuit Simplified

PLAYBACK HEAD AZIMUTH ADJUSTMENT

Coarse Adjustment

1. Connect the test set to either LINE OUT jack.
2. Thread a TEAC test tape YTT-1003 on the unit with MONITOR switch to TAPE position.
3. Depress forward button (▶) and play the 15 kHz test tone in section 2 of the test tape.
4. Slowly rotate the azimuth screw (forward) until maximum indication is indicated on the level meter.

   NOTE: If during playback, a slight pressure on the heads results in a rise of the reading of the level meter, head MECHANICAL ALIGNMENT readjustments should be accomplished. (See section

Fine Adjustment

   CAUTION: Do not make large corrections during fine adjustment, turn the screw 1/4 of a revolution or less.

5. It is absolutely essential to accomplish the coarse adjustment before using this method to avoid phase errors larger than 45°.
6. Connect the test equipment as shown in Fig. 7-2.
7. Play a 10 kHz signal and adjust the azimuth screw until the oscilloscope shows that the signals are less than 45° in phase.
8. Secure the azimuth adjustment screw with LOCTITE and apply the above procedure to the remaining playback head.

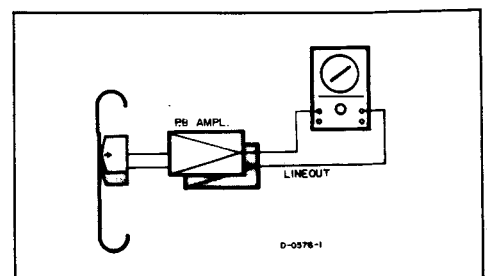


Fig. 7-2 Fine Adj. Set-up

SPECIFIED OUTPUT LEVEL SET

IMPORTANT: Unless otherwise specified, the EQ/LEVEL switch must always be in the HIGH position during measurement and adjustment.

9. Play the 400 Hz tone in section 1 of the test tape. This tone is recorded at operating reference level (1% of the THD level).
10. Turn the OUTPUT controls fully clockwise, and adjust VR-103/203 for -2 dB reading on the test set.
11. Then turn OUTPUT controls(C.C.W.) until a -8 dB reading is obtained on the test set. If equal VU meter reading cannot be obtained with both OUTPUT controls at 2 o'clock, readjust VR-103/203 slightly.

NOTE: This is the specified output level setting. Do not disturb this setting until the remaining adjustments have been completed.

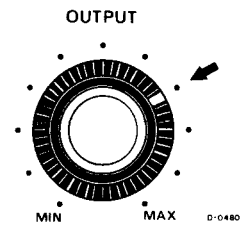


Fig. 7-3 Specified Set Position

VU METER CALIBRATION -PLAYBACK-

Place the EQ/LEVEL switch to the NORMAL position.

12. While playing the 400 Hz tone (1% THD) in section 1 of the test tape, adjust VR-104/204 for a reading of 0 VU on the VU meter.

HIGH level check: While playing back 400 Hz (operating reference level) signal, move the EQ/LEVEL switch from NORMAL to HIGH position. The VU meter should decrease 3 dB. This is a performance check only. After checking, keep the EQ/LEVEL switch in the HIGH position.

FREQUENCY RESPONSE AND THE PLAYBACK EQUALIZATION ADJUSTMENT

13. Play section 3 of TEAC Test Tape YTT-1003 at 7-1/2ips (which was recorded at 10 dB below the operating reference level). *On the A-7030GSL, Use YTT-1004 at 15ips.*
14. Compare the readings with the response limits given in fig. 7-4.
15. Adjust the equalization trimmer resistors VR-101/201 to obtain the flattest possible response within ±2 dB limits between 7.5 kHz and 10 kHz. *On the A-7030GSL, within from 7.5 kHz to 20 kHz.*

16. Play section 3 of TEAC Test Tape YTT-1002 at 3-3/4ips. (A-7010GSL only)
17. Compare the readings with the response limits given in fig. 7-4.
18. Adjust the equalization trimmer resistors VR-102/202 to obtain the flattest possible response within ±2 dB limits between 7.5 kHz and 10 kHz.

NOTE: During reverse play, the readings should be almost identical with forward play. However, do not made any adjustments of the trimmers during reverse play (A-7010GSL only).

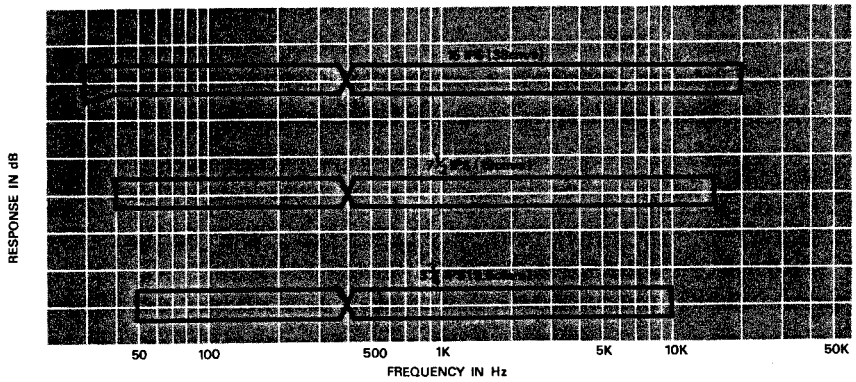


Fig. 7-4 Frequency Response Limits -Playback-

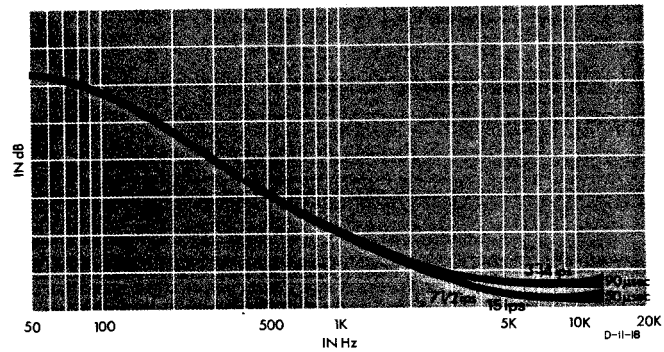


Fig. 7-5 Equalization Curves -Playback-

SIGNAL TO NOISE RATIO CHECK

NOTE: Values given are obtained using an unweighted level meter while the supply and take-up motors have voltage applied but are not rotating. The OUTPUT control should be at specified output position.

1. Thread a tape on the unit, leaving the tape outside the capstan and pinch roller. Tension arm should be in ON position.
2. Place the unit in the PLAY mode (▶) (the tape will not move).
3. The level meter connected to the LINE OUT jacks should indicate as listed below.

A-7030GSL:	-56dB/15ips & 7-1/2ips
A-7010GSL:	-56dB/7-1/2ips
	-54dB/3-3/4ips

For example: -56 dB indicated corresponds to a signal to noise ratio of 48 dB (difference between residual noise -56 dB and the specified output level of -8 dB for 1% THD).

For a 3% THD signal to noise ratio, 6 dB is added, giving 54 dB (3% THD is 6 dB above 1% THD level).

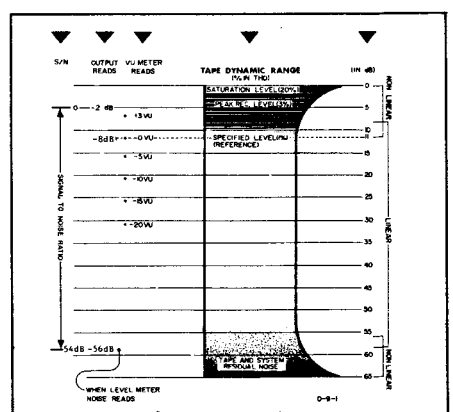


Fig. 7-6 Signal & Noise Computation

MONITOR AND RECORD PERFORMANCE

MINIMUM INPUT LEVEL ADJUSTMENT

IMPORTANT: The EQ/LEVEL switch must be in HIGH position.

LINE Input

1. Connect an AF oscillator to the LINE IN jacks.
2. Apply a 400 Hz signal at -18 dB.
3. Place the MONITOR switch in the SOURCE position and turn the LINE controls fully clockwise.
4. Adjust VR-105/205 to obtain the specified output level of -8 dB at LINE OUT jacks.

MIC Input

5. After adjusting VR-105/205, apply a 400 Hz signal at -70 dB to the MIC IN jacks.
6. Rotate the MIC controls fully clockwise.
7. The output should be -8 dB (specified output level).

NOTE: Mic input requires no adjustment, only an operational check. After completing the check rotate MIC controls fully counter clockwise to eliminate noise from MIC jacks or mic preamplifiers.

SPECIFIED INPUT LEVEL SET

8. Apply a 400 Hz signal at -8 dB to the LINE IN jacks.
9. Turn the LINE controls (c.c.w.) until a -8 dB reading is obtained on the level meter.

NOTE: Do not disturb the specified input level position of these controls until the remaining checks and adjustments are completed. The difference between the channels must not exceed 2 dB indicated on the level meter. If it is not within limits, VR-105/205 must be readjusted.

VU METER CALIBRATION -MONITOR-

10. With the same 400 Hz signal at -8 dB applied and the MONITOR switch in SOURCE, adjust VR-106/206 for 0 VU on the VU meters.

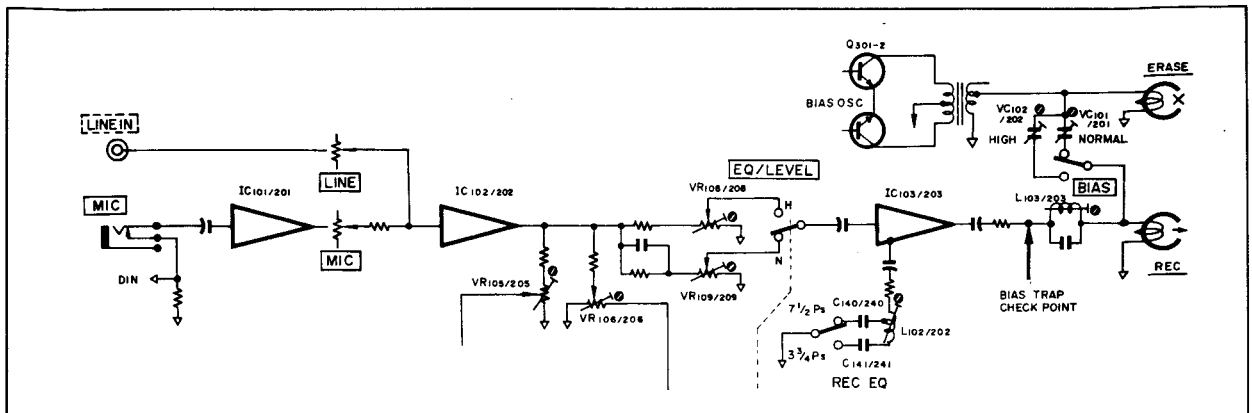


Fig. 7-7 Adjustment Parts Location -Monitor-

RECORD HEAD AZIMUTH ADJUSTMENT

Coarse Adjustment

NOTE: The effect of turning the azimuth screw will not immediately register on the level meter. A slight delay will be noticed. Therefore, rotate the screw slightly, and then pause to see the effect on the level meter.

1. Connect a Level Meter to the LINE OUT jacks and an AF oscillator to the LINE IN jacks.
2. Place the MONITOR switch to SOURCE and adjust the AF oscillator to obtain a signal of 15 dB below the specified output level. (The level meter will indicate -23 dB.)
3. Make certain that the LINE control is at the specified input level position, then set the AF oscillator to 10 kHz.
4. Thread a record test tape and place the unit in the record mode.
5. Change the MONITOR siwtch to the TAPE position.
6. Adjust the azimuth screw for maximum indication of the test set level meter.

Fine Adjustment

NOTE: It is absolutely essential to accomplish the coarse adjustment before using this method, to avoid phase error larger than 45°.

7. Connect the test equipment as shown in figure below.
8. Apply a 7.5 kHz signal at -23 dB to the LINE IN jacks and record this signal.
9. While recording carefully adjust the azimuth screw until the oscilloscope shows the signals to be in phase.
10. Secure the screw with a drop of LOCTITE.

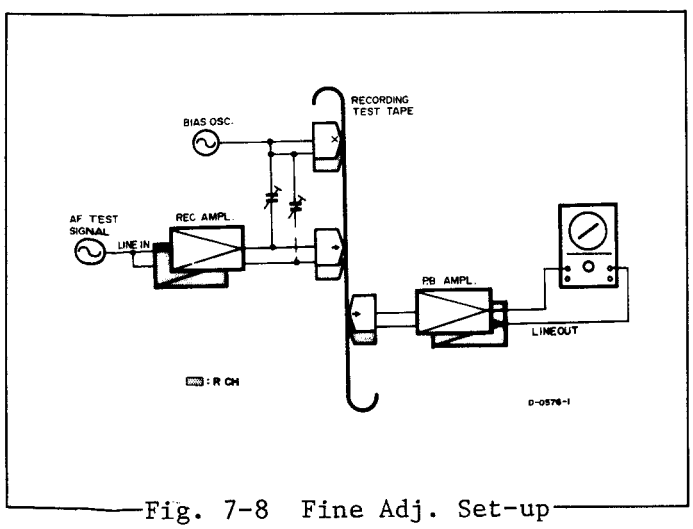


Fig. 7-8 Fine Adj. Set-up

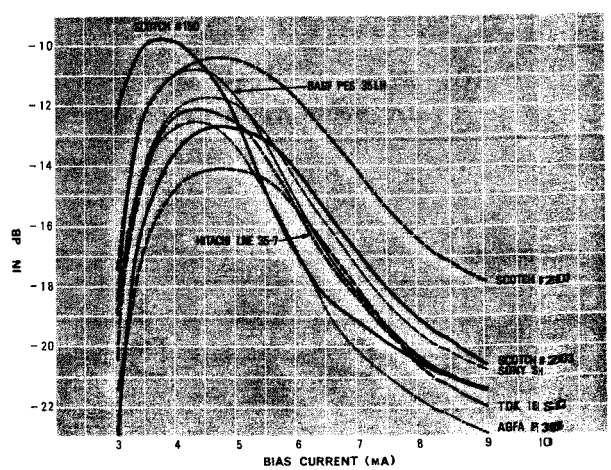


Fig. 7-9 Bias Current Characteristic

RECORD AMPLIFIER PERFORMANCE

IMPORTANT: Before making any adjustments on the record amplifier, be sure that all tests in the MECHANICAL HEAD ALIGNMENT, PLAYBACK and MONITOR PERFORMANCE sections have been accomplished and that all adjustments are correct. Optimum recording performance (Bias levels, recording levels and frequency response) depends upon tape characteristics. The TEAC A-7010GSL/7030GSL is factory preferred set for Scotch type 203 tape. Service data is based upon the use of Scotch 203 or a close equivalent tape.

BIAS TRAP ADJUSTMENT

NOTE: The bias trap tank circuit keeps the bias signal from reaching the record and monitor amplifier and under normal "no signal" conditions, voltage should not be present at the LINE OUT jacks.

NOTE: See figure for the location of these adjustments.

1. Thread a blank tape or block tension arm in ON position.
2. Place the MODE L·R switches up.
3. Place the BIAS switch to HIGH and place the unit in the record mode. Place the EQ/LEVEL switch in the HIGH position.
4. Connect a VTVM to the junction of L-103/203, R-145/245 and adjust L-103/203 for a min. reading.
5. Connect a VTVM to the LINE OUT jack. Adjust L-101/201 for a min. reading on the VTVM or oscilloscope.

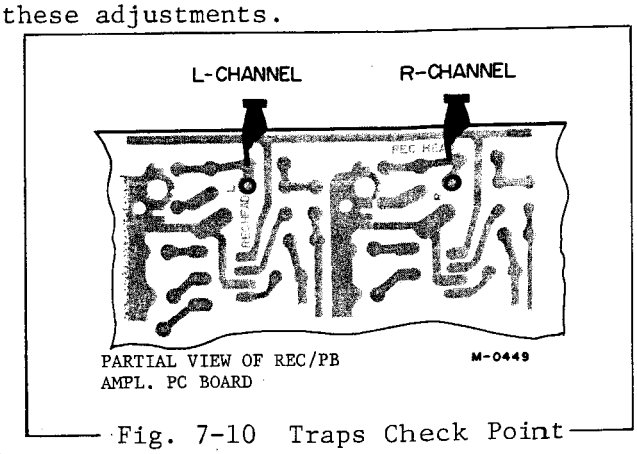


Fig. 7-10 Traps Check Point

BIAS ADJUSTMENT -Adjustments are accessible from the rear panel.

NOTE: These adjustments are only made at 7-1/2ips. The bias oscillator frequency is 100 kHz (±10 kHz).

HIGH bias position

1. Thread Scotch 203 recording test tape onto the unit.
2. Place the BIAS EQ/LEVEL switch to HIGH, the MONITOR switch to TAPE. Place the unit in the record mode.
3. With the level meter connected to the LINE OUT jacks, adjust capacitors VC-102/202 for a peak reading in each channel.
4. Then retard the capacitors clockwise until a decrease of 0.5 dB is indicated.

NORMAL bias position

5. Thread a Scotch 150 recording test tape onto the unit.
6. Change the BIAS switch to NORMAL and place the unit in the record mode. Adjust as above with VC-101/201.

RECORD LEVEL SET - Adjustments are accessible from the rear panel.

HIGH position

7. The OUTPUT and LINE controls must be at the specified level position.
8. Apply a 400 Hz signal at -8 dB to the LINE IN jacks.
9. Thread record test tape Scotch 203 on the unit, then set the BIAS and EQ/LEVEL switch to HIGH position.
10. Place the unit in the stereo record mode with the MONITOR switch in the TAPE position.
11. While recording this signal on the Scotch 203 record test tape, adjust VR-109/209 for a reading of 0 VU on the VU meters (-8 dB at the OUTPUT jacks).

    NOTE: REC level VR-109/209, 108/208 and VU meter calibration VR-106/206 will interact; after adjusting REC level, recheck VR-106/206 to ascertain that it is still correct.

NORMAL position:

12. Thread record Scotch 150 tape on the unit, then set the BIAS and EQ/LEVEL switch to NORMAL position.
13. Repeat step 7 and 8 above, and record this signal on the tape.
14. Adjust VR-108/208 for a reading of 0 VU on the VU meters.
15. After this adjustment, return the BIAS and EQ/LEVEL switch to HIGH position.

LEVEL VARIATION CHECK

Using TEAC M-826A level meter and Scotch 203 test tape, recording at the specified level setting with BIAS control in HIGH position, the output level variations should not exceed those shown in the chart below.

A-7010GSL	7-1/2ips:	0.5 dB at 400 Hz 1.0 dB at 15 kHz
	3-3/4ips:	1.0 dB at 10 kHz
A-7030GSL	15ips:	1.0 dB at 20 kHz
	7-1/2ips:	1.0 dB at 15 kHz 0.5 dB at 400 Hz

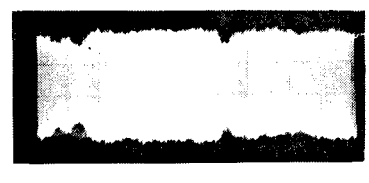


Fig. 7-11 Level Variation Wave Form

OVERALL FREQUENCY RESPONSE AND THE RECORDING EQUALIZATION ADJUSTMENT

IMPORTANT: To avoid saturation of the tape, these checks should be made at least 15 dB below the specified input level. Any bias signal feeding into the test equipment should be filtered out by adjusting the external bias trap. A broad band VTVM may be used on the output of the unit for this adjustment.

1. With the MONITOR switch at TAPE, and the OUTPUT and LINE controls at their specified level position:
2. Place BIAS,EQ/LEVEL switch in HIGH position, thread Scotch 203 record test tape on the unit.
3. Record test signals(approximately 30 seconds each)of a variety of frequencies: 50, 100, 250, 400Hz; 1, 2.5, 5, 7.5, 10, 15, 20 kHz at 7-1/2ips or 15ips.
4. Repeat step 3 at 3-3/4ips with frequencies from 40 Hz to 10 kHz.
5. Compare the outputs with the frequency response chart in figure. The level variation should not exceed ±0.5 dB at the 400 Hz reference point, ±1.5 dB at 15 kHz. At 3-3/4ips, you may see up to ±2 dB at 10 kHz.
6. If adjustment is required, adjust L-102/202 at 7-1/2ips (on the A-7030GSL, 15ips). If the coil adjustments do not bring the response within limits, then adjust C-140/240 at 7-1/2ips (on the A-7030GSL, 15ips), and C-141/241 at 3-3/4ips (on the A-7030GSL, 7-1/2ips). Make these adjustments so that you obtain the most level response across the spectrum in reference to 400 Hz.
7. Repeat steps 3, 4 and 5 with Scotch 150 tape and set the BIAS switch to NORMAL position. Response should be flat as shown before the dotted portion of the chart.

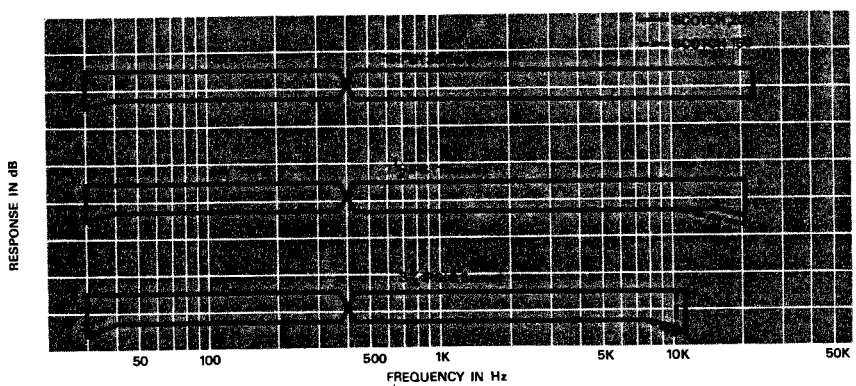


Fig. 7-12 Frequency Response Limits -Record-

OVERALL SIGNAL TO NOISE RATIO

IMPORTANT: Clean and demagnetize the heads before proceeding. It is extremely important that all tests described in the proceeding paragraphs have been completed and that all controls adjusted are left unaltered.

1. Thread a record test tape Scotch 203 on the unit.
2. Remove the AF oscillator from the LINE IN jacks.
3. Place the unit in the RECORD mode with no signal applied.

NOTE: Noise readings, when taken while recording, may be affected by the bias signal which could be leakings through. It is therefore good practice torewind the "no signal" recorded section and take the noise reading during playback.

4. Note the point on the index counter where recording begins.
5. Rewind the tape and play it back.
6. The noise level as indicated on the test set level meter should be as indicated in the chart below.

NOTE: Bias, erase and playback amplifier noise are all included in this measurement. All frequencies between 40 Hz and 20 kHz are measured unweighted.

MODEL	TAPE SPEED	LEVEL METER READING
A-7010GSL	3-3/4ips 7-1/2ips	-46dB or less -48dB or less
A-7030GSL	7-1/2ips 15ips	-48dB or less -56dB or less

ERASE EFFICIENCY CHECK

NOTE: To measure erase efficiency, a 1 kHz band pass filter (TEAC M204 CL filter) must be used.

Due to the high level of this signal, it is recommended that only a short recording be made (approximately 20 seconds) to prevent damage to the VU meter.

1. Apply a 1 kHz signal at 0 dB to the LINE IN jacks.
2. Place the unit in record mode and record this signal.
3. Rewind the recording to the beginning and remove the AF oscillator from the LINE IN jacks.
4. Place the unit in record mode and record over this portion of tape again with no signal applied.
5. Rewind the tape to the starting point. Connect the band pass filter to the LINE OUT jacks. Connect the test set leads to the filter.
6. Play the erased portion of the tape.
7. The level meter should indicate -70 dB or more on each channel.

SPECIAL CIRCUIT

PHASE SENSING CIRCUIT SYSTEM A-7010GSL only

The phase sensing reverse utilizes a separate amplifier located on the bottom of the A-7010GSL transport section.
When the SIGNAL RECORD and (▶) buttons are depressed, the AC line frequency (50 or 60 Hz) signal is recorded on the tape at a level of approximately +4∿10 dB. This signal, however, is recorded out of phase between the left and right channels since one of the record head poles is electrically reversed during this mode. During playback with the AUTO REVERSE switch ON position, the record heads act as the sensing device and are connected out of phase as they were during the recording of the reversing signal.
Because the heads are now out of phase in respect to the normal audio signals they generate very little or no output since the signals tend to cancel each other out. However, when the previously recorded, out of phase, reversing signal reaches the recording head it is now in phase in respect to the record head and generates a signal which is amplified, rectified and utilized to energize the reverse relay.
It is feasible that a strong signal with no counterpart on the other channel to cancel it out could cause the recorder to reverse. However, proper adjustment of the reversing amplifier sensitivity control will eliminate this possibility.
It must be understood that the reversing signal is recorded at such a high level that normal signals do not approach this level.

Phase Sensing System Adjustments:

1. Thread a blank tape Scotch 203 on the recorder and set MONITOR switch to TAPE, TAPE SPEED switch to 3-3/4ips.
2. Place the MODE L·R switches in the UP position.
3. Place the AUTO REVERSE switch in the ON position and set VR-1 to full counter clockwise.
4. Depress the SIGNAL RECORD and the (▶) button for approximately 2 seconds.
5. Rewind the tape to the start of the recorded signal and press the (▶) button.
6. **While playing this signal, advance VR-1 until the recorder stops and reverses operation.**
7. Rewind the tape once more and check to see if the recorder stops and reverses, then increase the sensitivity of VR-1 slightly.

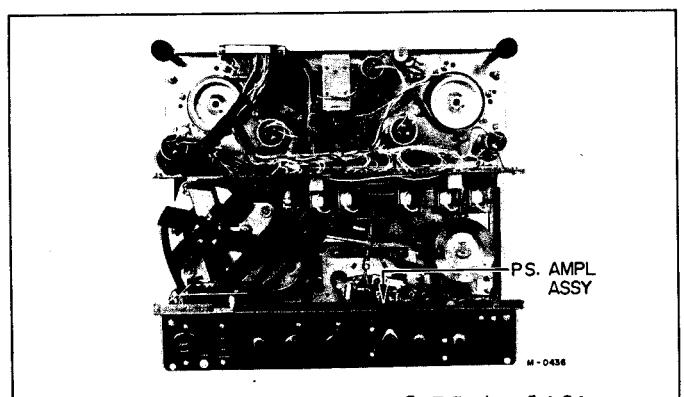


Fig. 7-13 Location of PS Amplifier

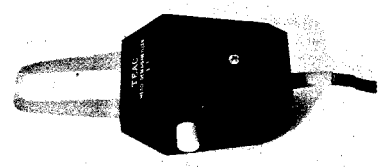
8. PREVENTIVE MAINTENANCE

The inner mechanism of the TEAC A-7010GSL/7030GSL is designed to require a minimum of maintenance. However, for optimum operation and long life, frequent cleaning of the tape path, sensing post, tension arm, tape guides, heads, capstan and pinch roller is a necessity. Do not neglect these easy procedures. If possible, they should be done before each recording session and after approximately 50 hours of playback use.
The following maintenance procedures are to be carried out after parts replacement, after extended periods of use or at overhaul. When installing new parts always clean the mechanism thoroughly using the TEAC Cleaning Kit.

TEAC MAINTENANCE EQUIPMENT

TEAC TZ-261
Cleaner

TEAC TZ-255
Oil Kit



TEAC E-1
Head Demagnetizer

DEMAGNETIZATION: Metal parts in contact with the tape (except erase head) will become magnetized after long periods of use. Magnetization of record/playback heads causes noise in recording and reproduction. Heads should be demagnetized at every 50 hours of use, and before any important recording is done. Refer to Operating Instructions.

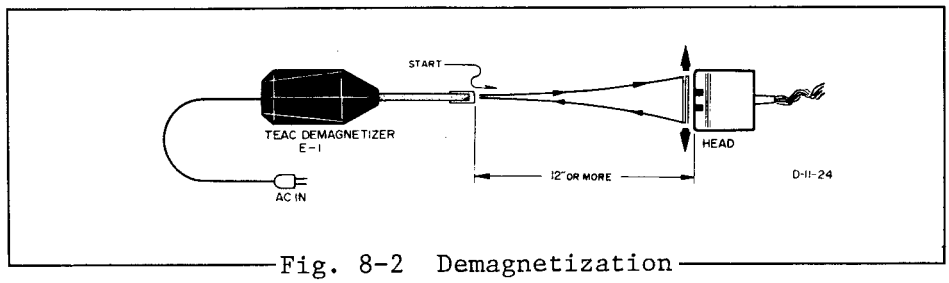
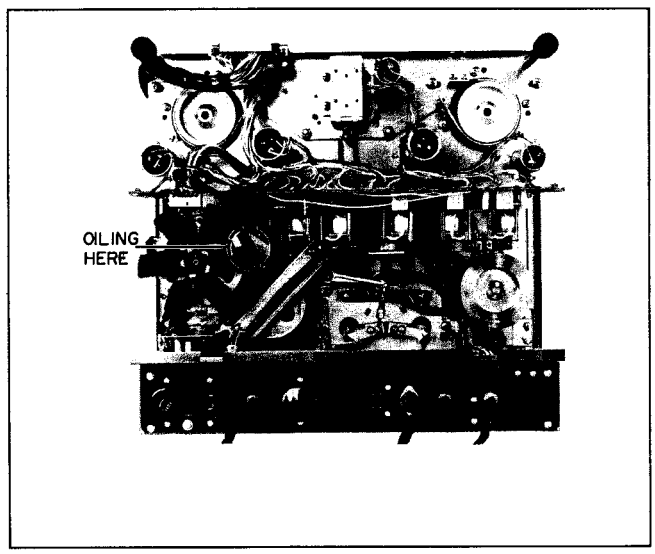


Fig. 8-2 Demagnetization



LUBRICATION: Under normal conditions the unit will not require lubrication. Most of the bearings and bushings are of the oil less type. Since there are many rubber parts in the transport mechanism, excessive or improper lubrication could cause problems. If lubrication is required, the following points should be lubricated;

Capstan bushing, pinch roller shaft ..... 1 drop
Capstan motor .....2∿4 drops in the plastic tubes

NOTE: The reel motor and impedance roller assembly are permanently lubricated with sealed ball bearing and require no lubrication.

Capstan motors should be lubricated immediately after use while still warm. After oiling motors keep the unit in the vertical position for 2∿3 hours to allow thorough absorption of oil.

CLEANING: If excess oxide accumulates on the surface of tape path components, normal operation and characteristics cannot be expected. Periodic cleaning should be done with proper cleaning materials. Refer to Operating Instructions.

9. TROUBLE SHOOTING CHART

NOTE: Our investigation into apparent malfunctions for which owners bring their machines into our repair shops has shown that an actual mechanical defect occurs in very few cases. Usually the indicated defect is as a result of improper operation of the machine, improper cleaning or lack of minor maintenance, or inadequate supplementary or associated equipment.
If your unit fails to perform properly, refer to the handbook of operation, clean and lubricate as per the instructions. Carefully check auxiliary or associated equipment before disassembling the machine or bringing it to the repair shop or service center. Close adherence to the maintenance, cleaning, lubricating and demagnetizing procedures outlined in the owners handbook will result in a long service life and optimum performance of your unit.

MALFUNCTION	POSSIBLE SOURCE	CORRECTIVE PROCEDURE
Capstan fails to turn. *Right tension arm ON position.*	Capstan belt off. Line fuse F-2. Shut off SW S-13(S-11) Motor cap. C-3 TAPE SPEED SW S-3 Rev. relay K-9 Capstan assy	Replace belt. Replace fuse. Check shut off SW. Replace capacitor. Check switch S-3. Check contacts. Check capstan shaft.
Pinch roller sails to contact capstan shaft in play mode. *Depress ▶ button.*	REMOTE cont. jumper plug not installed or loose J-3. STOP SW S-17 (S-15) (K-4-a) PAUSE connector plug not installed or loose. K-3a (K-6d) Capstan solenoid	Secure jumper plug. Check STOP SW. Check relay contacts. Insert PAUSE plug. Check relay contacts. Replace solenoid. NOTE: The normal DC resistance of solenoid is 1.8Ωk .
Reel motor doesn't rotate in play mode.	K-1(a,b)K-2c(K-2a,K-3a) (S-2 REEL SW) R4∿5 resistors Motor cap. C-4∿5(C-6∿7) Brake solenoid	Check relay contacts or replace. Check REEL SW. Check R4∿5 resistors. Check motor capacitor or replace. NOTE: Normal brake solenoid resistance is 1.1 kΩ.
Auto-reverse, stop, rewind and repeat does not function with sensing foil.	Sensing foil length too short. Sensing post dirty.	Foil should be 1/2 inch long. Clean sensing post.
Will not reverse play (A-7010GSL only)	REV relay K-5,K-6,K-9	Check relay contacts or replace.
Pinch roller 4 second delay faulty (A-7010GSL only)	R-10,C-8,K-2 delay relay (R-9,C-9,K-6 delay relay	Check components or replace.
Fast forward or rewind mode inoperative.	K-5,K-3(K-2,K-6,K-1) REEL SW S-2 R-7	Check relay contacts or replace.

TROUBLE SHOOTING CHART CONTINUED

MALFUNCTION	POSSIBLE SOURCE	CORRECTIVE PROCEDURE
Tape speed not normal or excessive wow and flutter.	Capstan belt on wrong pulley steps.	Corrective belt step position.
	Oil on belt, pinch roller.	Clean belt and flywheel.
	Pinch roller pressure.	Check pressure and adjust.
Tape damage.	Reel height incorrect.	Check reel height.
	Excessive take-up torque.	Check for torque.
	Brake torque not even.	Check for brake torque or replace the solenoid.
No playback	MONITOR SW.	Verify SW & controls position.
	OUTPUT control.	
	Playback heads dirty.	Clean head with TEAC cleaner.
	Play head connector loose or out.	Check connection.
	Playback ampl.	Check ampl.
	Take (no signal on tape)	Change tape.
Playback noise or loss of high freq.	Faulty connections.	Reconnection.
	Head relay K-8.	Check contact or replace.
	Head dirty.	Clean head with TEAC cleaner.
	Playback EQ.	Readjust EQ. properly.
No record and/or no erase.	Erase, record head dirty.	Clean head with TEAC cleaner.
	Auto-reverse SW in ON.	Make sure SW position.
	Record relay K-7.	Repair or replace.
	Interconnection cables loose or out.	Check for plug.
	REC ampl. Bias OSC.	Check or repair.
Loss of high freq. during record.	Head dirty.	Clean head with TEAC cleaner.
	Back tension.	
	Bias adj.	Check bias and readjust properly.
Channels not balanced during record.	Head dirty.	Clean head with TEAC cleaner.
	Bias adj.	Check bias adjustment.
	REC. level calibration.	Check REC. CAL.
	Head alignment.	Check head alignment.
Channel unbalanced during playback.	Tape faulty.	Change tape.
	Head dirty.	Clean head.
	Head alignment.	Adjust for head alignment.
	OUTPUT control.	Check for control set position.
	VU meter.	Check meter sensitivity.
	Playback level calibration.	Adjust PB calibration.

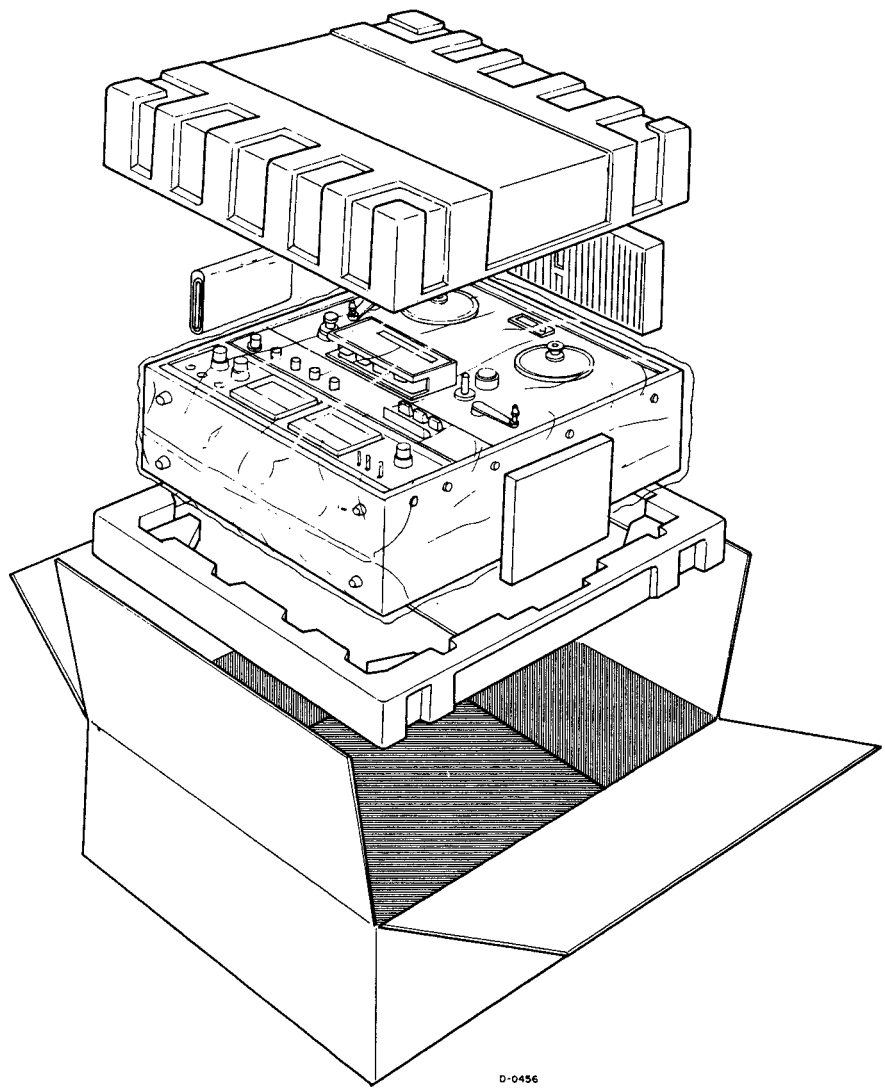
WARRANTY

Your TEAC equipment has been manufactured under strict quality control. Its normal operation is under warranty. However, warranty terms may vary with the country (area) in which it was purchased and for different models of equipment.
The warranty terms are fully described on the warranty card. Please read the card for complete details.

PACKING FOR SHIPMENT

SHIPPING INSTRUCTIONS

If the unit is to be sent back to the TEAC factory (service department) for repair, carefully pack as shown below.



A-7010 GS
A-7030 GS

TEAC®

A-7010 GSL
A-7030 GSL

STEREO TAPE DECK

PARTS LIST

REPLACEMENT INFORMATION

Replacement part are available through your nearest TEAC dealer or directly from the TEAC office.
Changes are constantly being made to make TEAC products better and more reliable.
Therefore, when ordering parts, always include the following information:

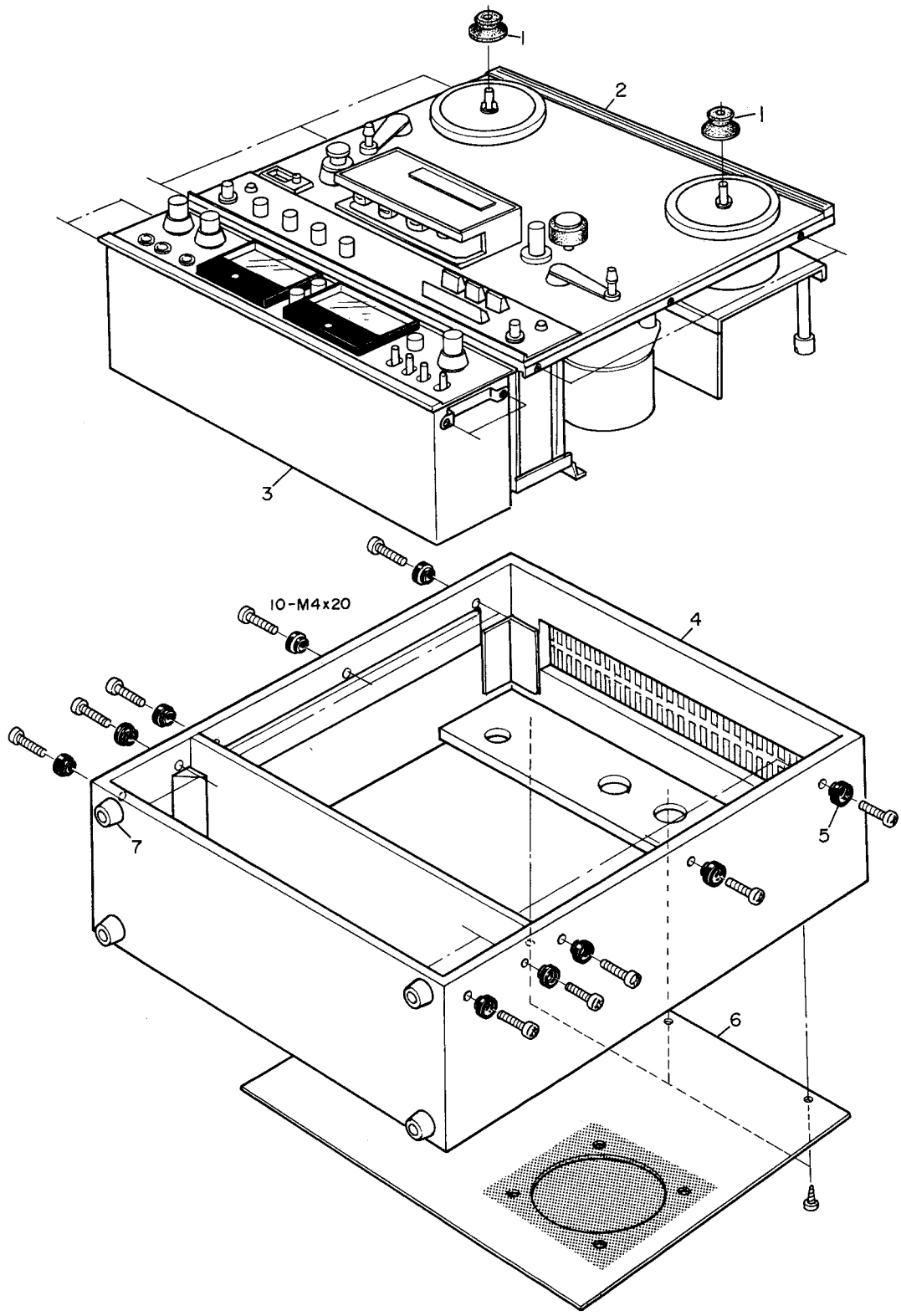
MODEL SERIAL NO. REF NO. PART NO. DESCRIPTION

F-299

TEAC CORPORATION

EXPLODED VIEW 1
A-7010GSL A-7030GSL

TRIM PARTS

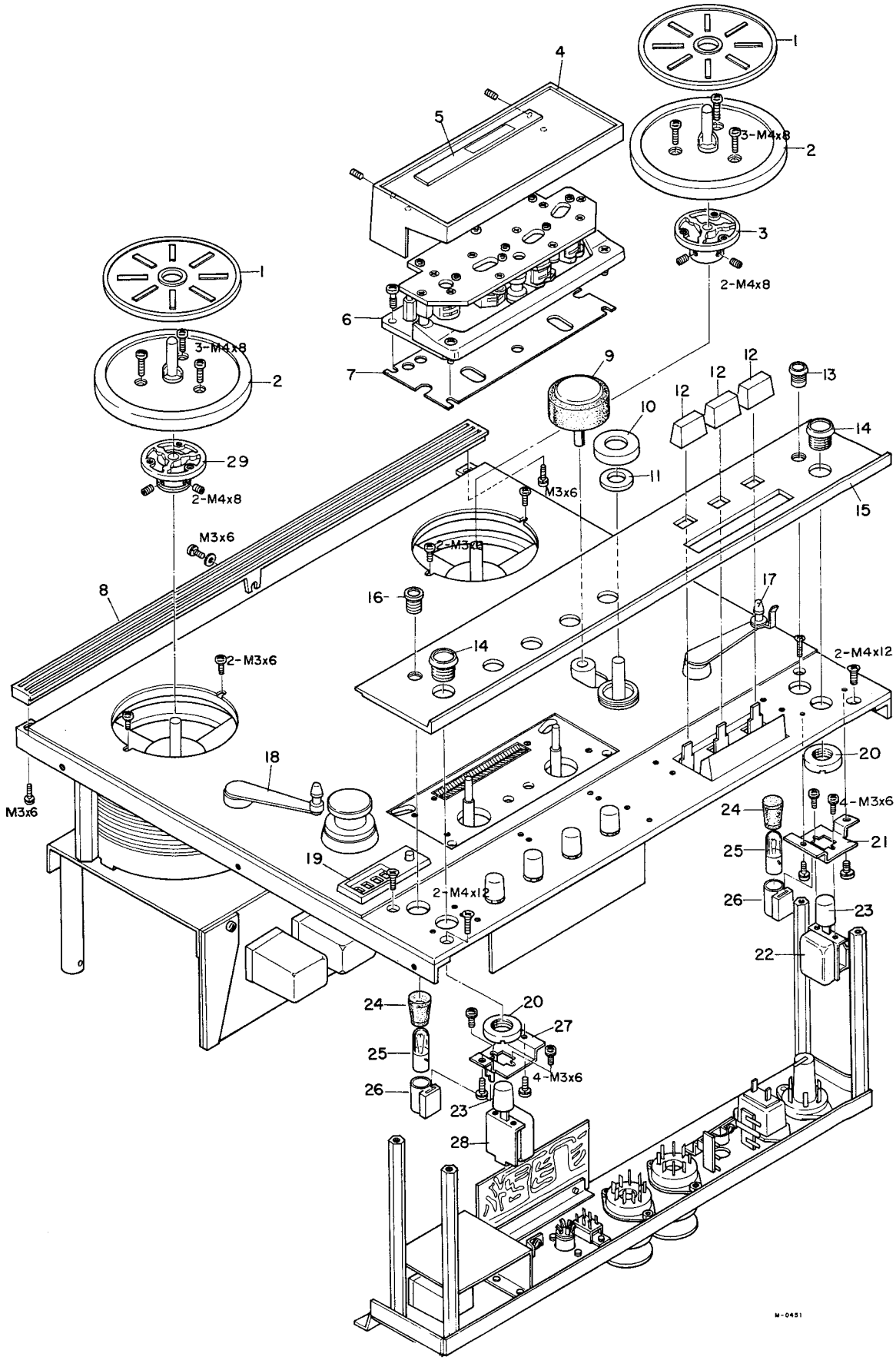


TRIM PARTS

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
1-1	50161580	Reel Holder		
1-2		Tape Transport		
1-3		Record/PB Ampl. AR-70GSL		
1-4	50287521	Case, Wooden		
1-5	50276930	Washer, Trim		
1-6	50286310	Cover, Rear		
1-7	50283830	Mount Foot		

EXPLODED VIEW 2
A-7010GSL A-7030GSL

ABOVE THE MAIN CHASSIS



ABOVE THE MAIN CHASSIS

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
2- 1	50162161	Mat, Reel Table	* See the NOTE below.	
2- 2	50162181	Reel Table	* See the NOTE below.	
2- 3	50162150	Flange, Reel Table, R	* See the NOTE below.	
2- 4	50136390	Head Housing (except Name Plate)		
2- 5	50136410	Name Plate, B (A-7010GSL)(DM,EX)		
	50136450	Name Plate, E (7010GSL)(TCA only)		
	50136420	Name Plate, C (A-7030GSL)(DM,EX)		
	50136460	Name Plate, F (7030GSL)(TCA only)		
2- 6	50500760	Head Assy (for A-7010GSL)		
		Head Assy (for A-7030GSL)		
2- 7	50133751	Shield Plate, Head Assy		
2- 8	50112730	Air Vent		
2- 9	50140260	Pinch Roller Assy		
2-10	50122863	Cap, Dust		
2-11	50125010	Oiler		
2-12	50252271	Push Button, Control		
2-13	50415181	Pilot Holder, Record (Red)		
2-14	50253510	Escutcheon, Push Button		
2-15	50113210	Panel, Control (A-7010GSL/7010GSL)		
	50113220	Panel, Control (A-7030GSL/7030GSL)		
2-16	50415171	Pilot Holder, Power (Green)		
2-17	50180630	Right Tension Arm Sub (C) Assy (A-7010GSL)		
	50180640	Right Tension Arm Sub (C) Assy (A-7030GSL)		
2-18	50180620	Left Tension Arm Sub (C) Assy		
2-19	50271810	Escutcheon, Counter		
2-20	50210470	Nut, Escutcheon		
2-21	50234770	Bracket, A (Record SW)		
2-22	50443410	SW, Push (Record)		
2-23	50252320	Push Button, A		
2-24	50419070	Cover, Pilot Lamp		
2-25	50414580	Pilot Lamp, Bayonet Type (8V)		
2-26	50415250	Socket, Pilot Lamp		
2-27	50234780	Bracket, B (Power SW)		
2-28	50444510	SW, Push (Power)(EX,DM only)		
	50444500	SW, Push (Power)(TCA only)		
2-29	50162140	Flange, Reel Table, L	* See the NOTE below.	

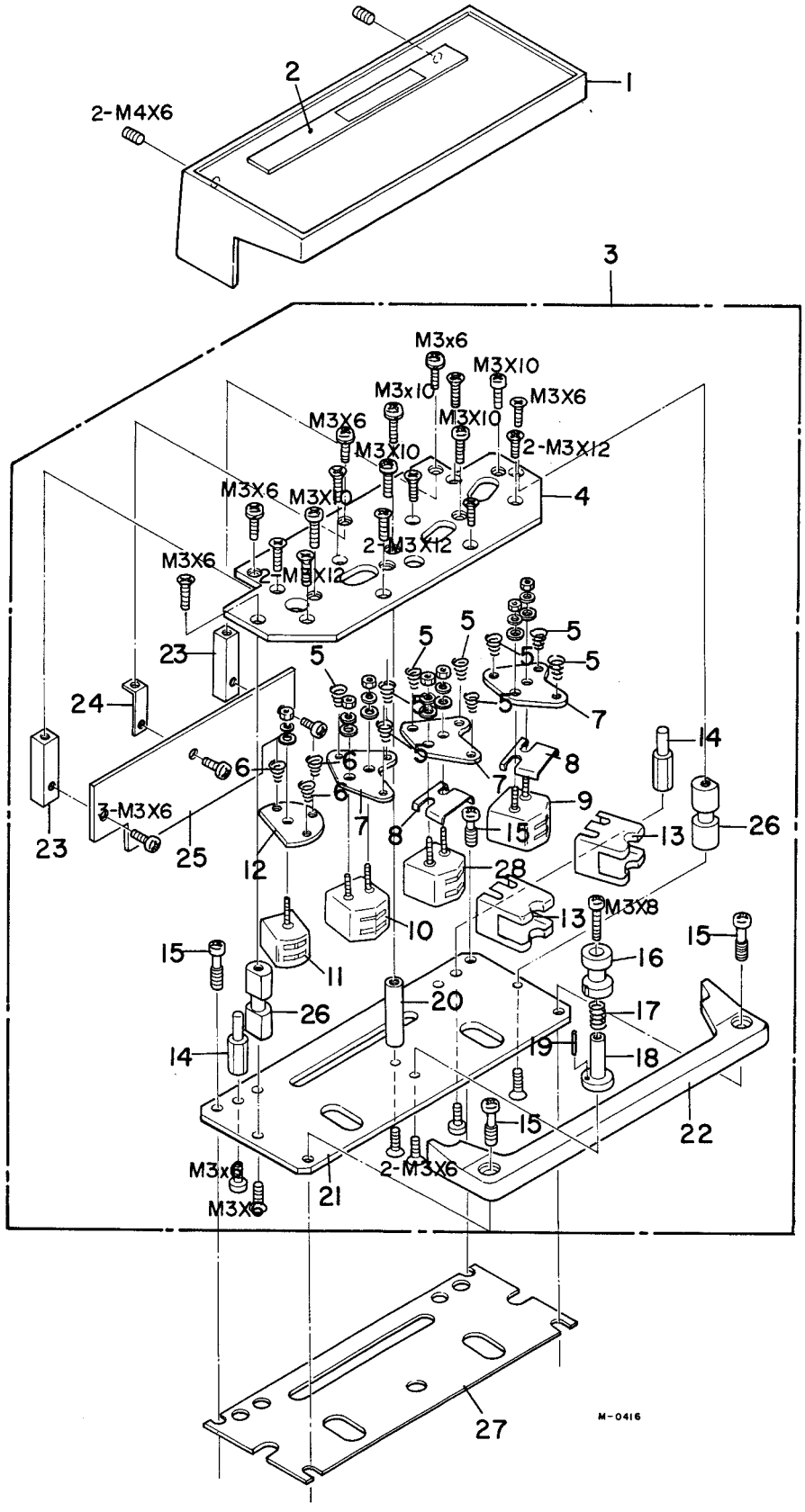
NOTE:
* Asterisk-indicated parts have been replaced by a complete assembly and are only available in the "Quik-Lok" Reel Table Assembly. For any of these parts, order TEAC Part Number 50160421 Reel Table Assy.

This change is applicable from Unit Serial Number 28741 (A-7010GSL) and 26391 (A-7030GSL).

"Quik-Lok" Reel Holder reel tables are standard with later models of this deck and are completely interchangeable with the earlier type illustrated.

EXPLODED VIEW 3
A-7010GSL A-7030GSL

HEAD ASSY

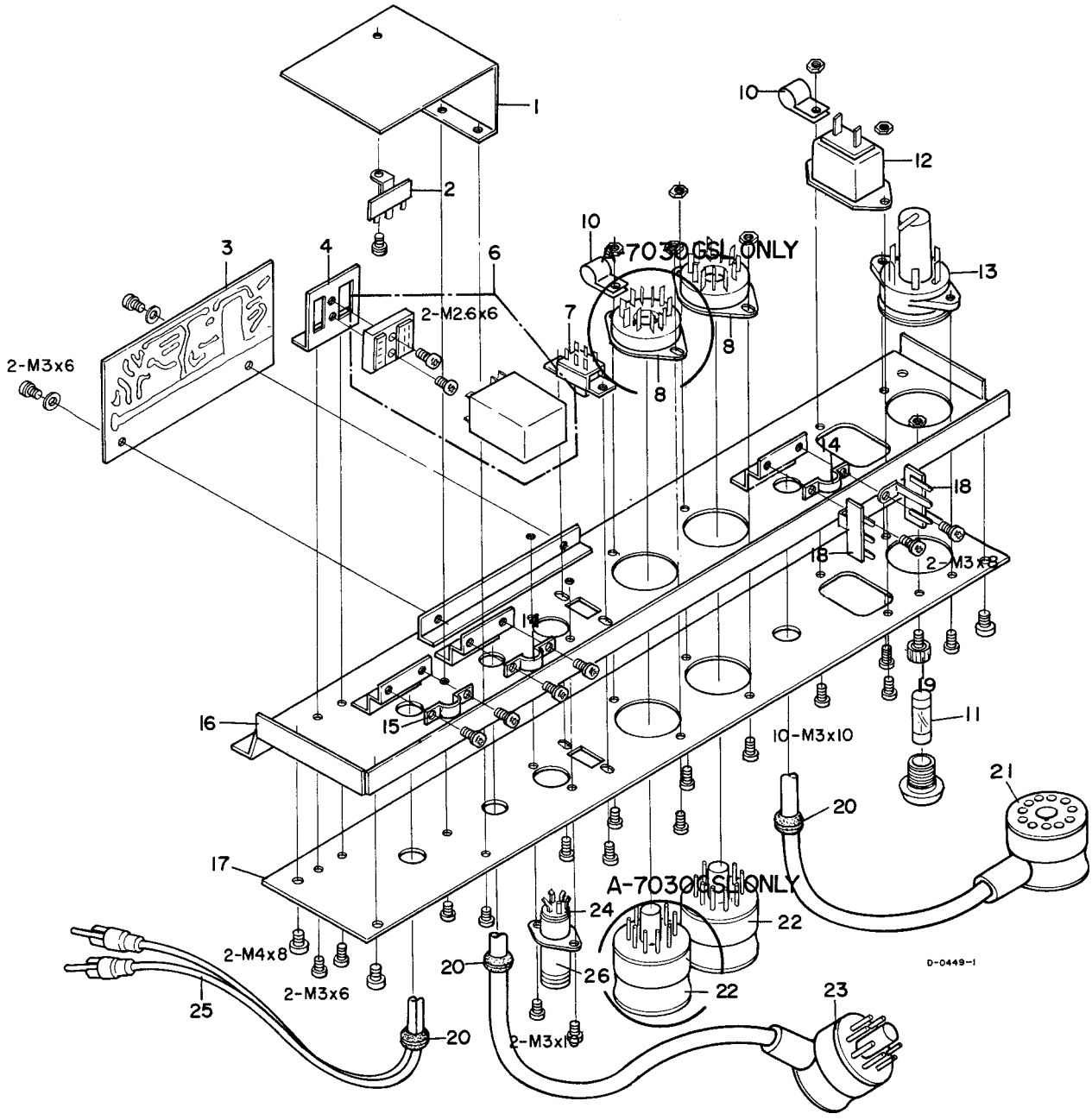


HEAD ASSY

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
3- 1	50136390	Head Housing (except Name Plate)		
3- 2	50136410	Name Plate, B (A-7010GSL)(DM,EX)		
	50136450	Name Plate, E (7010GSL)(TCA only)		
	50136420	Name Plate, C (A-7030GSL)(DM,EX)		
	50136460	Name Plate, F (7030GSL)(TCA only)		
3- 3	50500760	Head Assy		
3- 4	50133735	Plate, Head Base		
3- 5	50220500	Spring, Head, B		
3- 6	50220470	Spring, Head, A		
3- 7	50133830	Plate, Head, C		
3- 8	50675320	Spacer, PB Head		
3- 9	50667310	Head, PB (Ferrite) 4T (A-7010GSL)		
	50666310	Head, PB (Ferrite) 2T (A-7030GSL)		
3-10	50667200	Head, Rec.(Ferrite) 4T (A-7010GSL)		
	50666200	Head, Rec.(Ferrite) 2T (A-7030GSL)		
3-11	50663030	Head, Erase 4T (A-7010GSL)		
	50662030	Head, Erase 2T (A-7030GSL)		
3-12	50133601	Plate, Erase Head		
3-13	50675650	Head Shield, A		
3-14	50133760	Stand-off, Head Housing		
3-15	50132770	Screw, Head Assy Mount		
3-16	50132640	Guide, Tape		
3-17	50220110	Spring, Tape Guide		
3-18	50132630	Shaft, Tape Guide		
3-19	50132650	Pin, Tape Guide		
3-20	50241140	Stand-off		
3-21	50133741	Plate, Housing Base		
3-22	50133720	Lower Head Protector		
3-23	50132610	Stand-off, Head Assy		
3-24	50132601	Angle, Head PC Board		
3-25	50483700	PC Board, Head		
3-26	50133810	Guide, Tape		
3-27	50133751	Shield Plate, Head Assy		
3-28	50667310	Head, PB (Ferrite) 4T		

EXPLODED VIEW 4
A-7010GSL A-7030GSL

REAR PANEL (TAPE TRANSPORT)

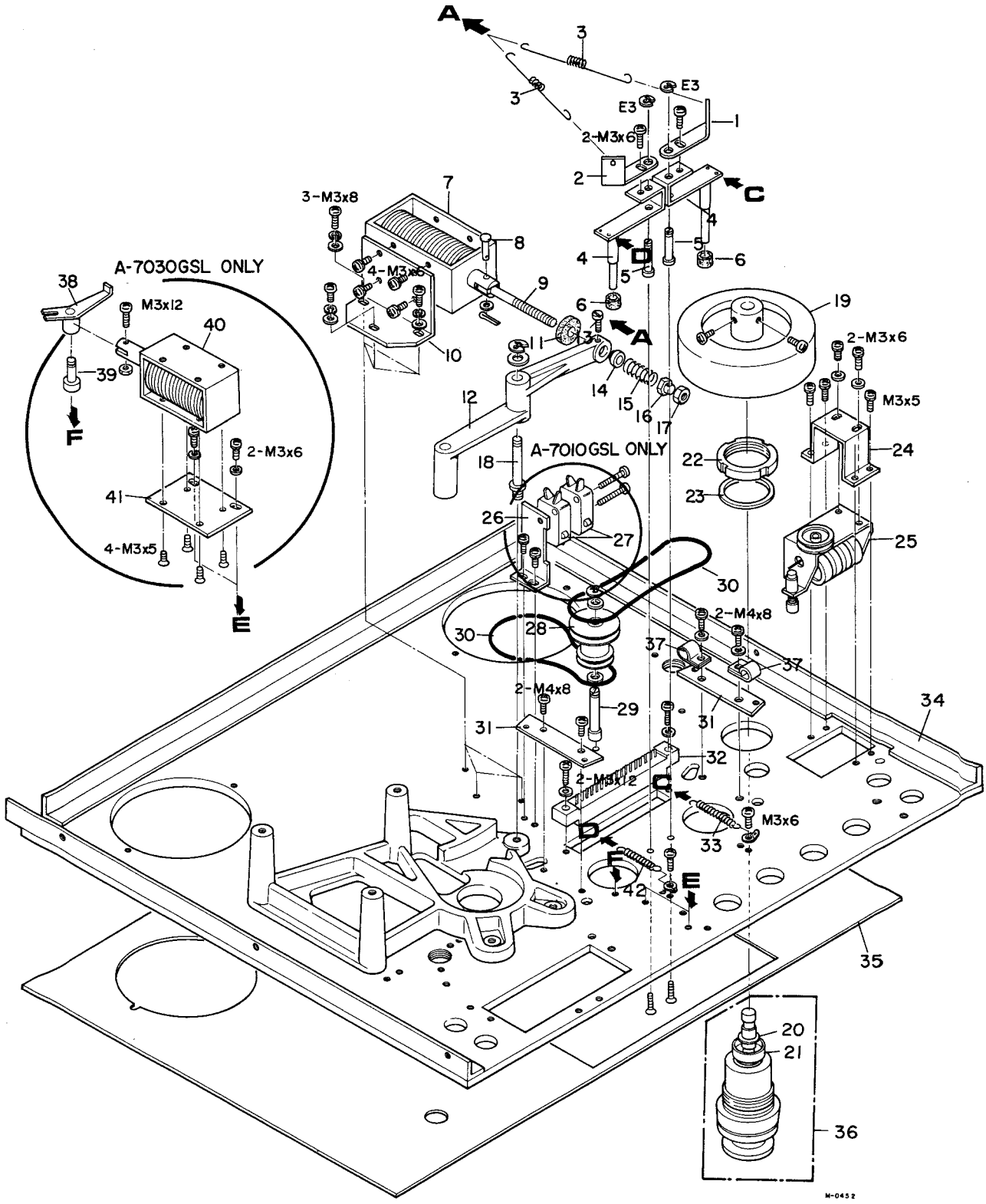


REAR PANEL (TAPE TRANSPORT)

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
4- 1	50135360	Shield Plate, Head Relay		
4- 2	50452170	Terminal Strip, 1L2P		
4- 3	50489280	PC Board Assy, P.S. Ampl. (Used on A-7010GSL only)		
4- 4	50135351	Bracket, Head Relay		
4- 6	50611090	Relay, Head		
4- 7	50444080	SW, Slide (A-7010GSL only)		
	50444221	SW, Slide (A-7030GSL only)		
4- 8	50432350	Socket, 11P (Female)		
4-10	50276290	Clamp, Wire, B		
4-11	50411140	Fuse, 2A		
4-12	50432950	Outlet, AC		
4-13	50412142	Voltage Selector, with Fuse		
4-14	50279480	Clamp, A		
4-15	50279490	Clamp, B		
4-16	50234921	Chassis, Connector		
4-17	50113271	Panel, Plastic Trim (A-7010GSL)		
	50113261	Panel, Plastic Trim (A-7030GSL)		
4-18	50452170	Terminal Strip, 1L2P		
4-19	50454071	Post, Grounding		
4-20	50323010	Grommet, Rubber		
4-21	50476800	Cord, Multiple Cond., B (11P) (A-7010GSL)		
	50476810	Cord, Multiple Cond., B (11P) (A-7030GSL)		
4-22	50432520	Plug, Dummy, 11P (A-7010GSL)		
	50432510	Plug, Dummy, 11P (A-7030GSL)		
4-23	50475590	Cord, Multiple Cond., A (8P) (A-7010GSL)		
	50475570	Cord, Multiple Cond., A (8P) (A-7030GSL)		
4-24	50430270	Receptacle, DIN 6P (Pause)		
4-25	50475610	Cord, Connection		
4-26	50430260	Plug, Dummy, 6P (Pause)		

EXPLODED VIEW 5
A-7010GSL A-7030GSL

BELOW THE MAIN CHASSIS

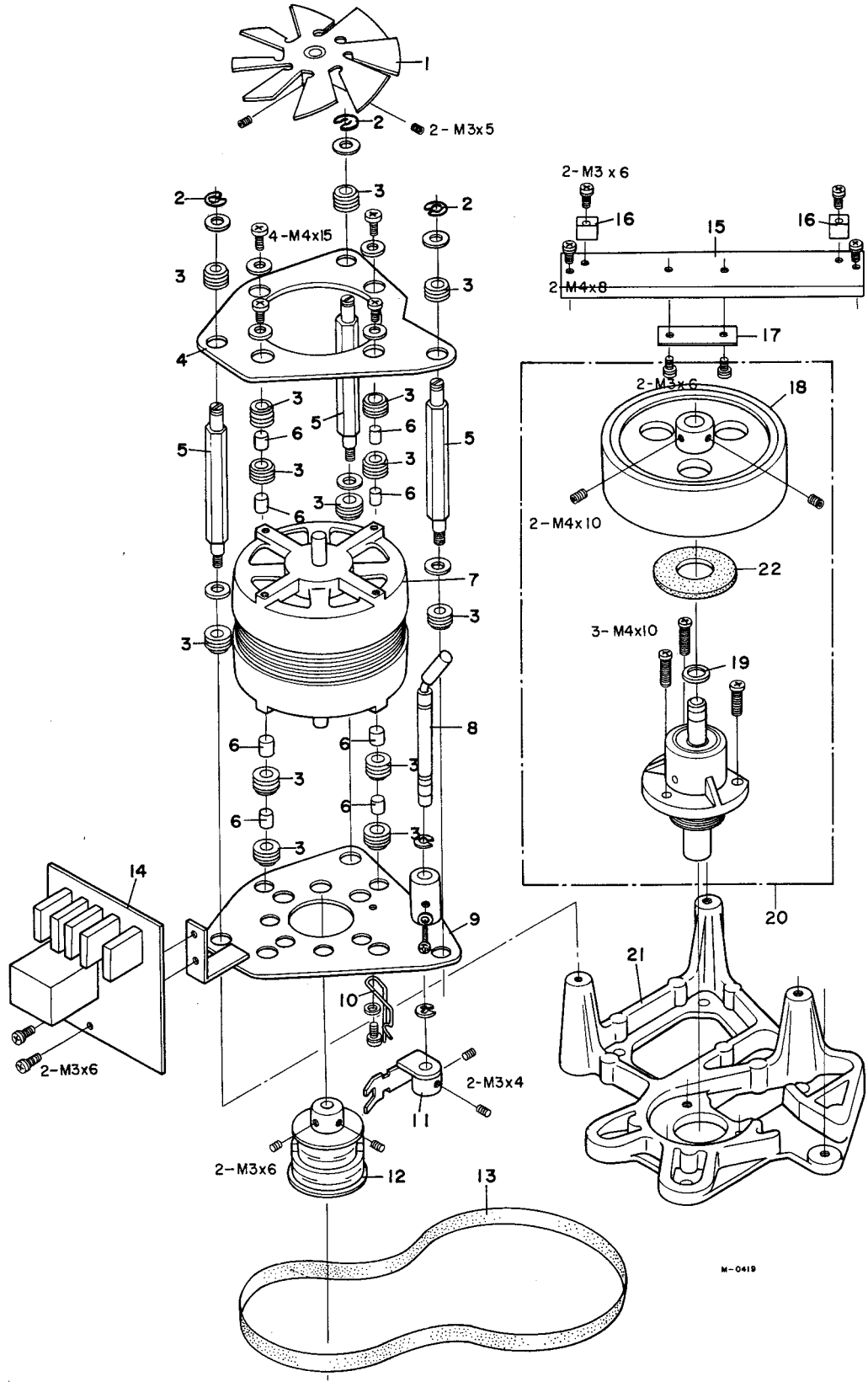


BELOW THE MAIN CHASSIS

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
5- 1	50152520	Arm, Lifter Lower, L		
5- 2	50152510	Arm, Lifter Lower, R		
5- 3	50151963	Spring, Lifter		
5- 4	50150130	Lifter Arm Assy		
5- 5	50151982	Shaft, Lifter Arm		
5- 6	50277350	Ring, Rubber		
5- 7	50616393	Solenoid, Capstan		
5- 8	50121550	Pin, Plunger, A		
5- 9	50121530	Screw, Pressure Adjust		
5-10	50141550	Plate, Solenoid		
5-11	50271520	Washer, Felt		
5-12	50141594	Arm, Pinch Roller		
5-13	50151971	Screw, Lifter Spring		
5-14	50141581	Washer		
5-15	50220041	Spring, Pressure		
5-16	50141501	Nut, Lock, A		
5-17	50141511	Nut, Lock, B		
5-18	50141571	Shaft, Roller Arm		
5-19	50122142	Flywheel, Impedance Roller		
5-20	50221210	Washer, Spring		
5-21	50124110	Washer, Shoulder		
5-22	50121430	Nut, Collar		
5-23	50121440	Washer		
5-24	50124290	Bracket, Counter		
5-25	50585050	Counter		
5-26	50273142	Bracket, Micro SW (A-7010GSL only)		
5-27	50446180	SW, Micro (A-7010GSL only)		
5-28	50125810	Pulley, Counter Idler		
5-29	50125830	Shaft, Idler		
5-30	50277590	Belt, Counter		
5-31	50133770	Plate, Head Assy		
5-32	50438130	Connector, 18P		
5-33	50152020	Spring, Lifter Return		
5-34	50113191	Panel, Chassis		
5-35	50112780	Panel, Trim		
5-36	50126231	Impedance Roller Assy		
5-37	50276280	Clamp, Wire		
5-38	50152550	Arm, Cue (A-7030GSL only)		
5-39	50152561	Shaft, Cue Arm (A-7030GSL only)		
5-40	50616432	Solenoid, Cue (A-7030GSL only)		
5-41	50616410	Plate, Cue Solenoid (A-7030GSL only)		
5-42	50152570	Spring, Lifter Return, A		

EXPLODED VIEW 6
A-7010GSL

CAPSTAN DRIVE ASSY
A-7010 GSL

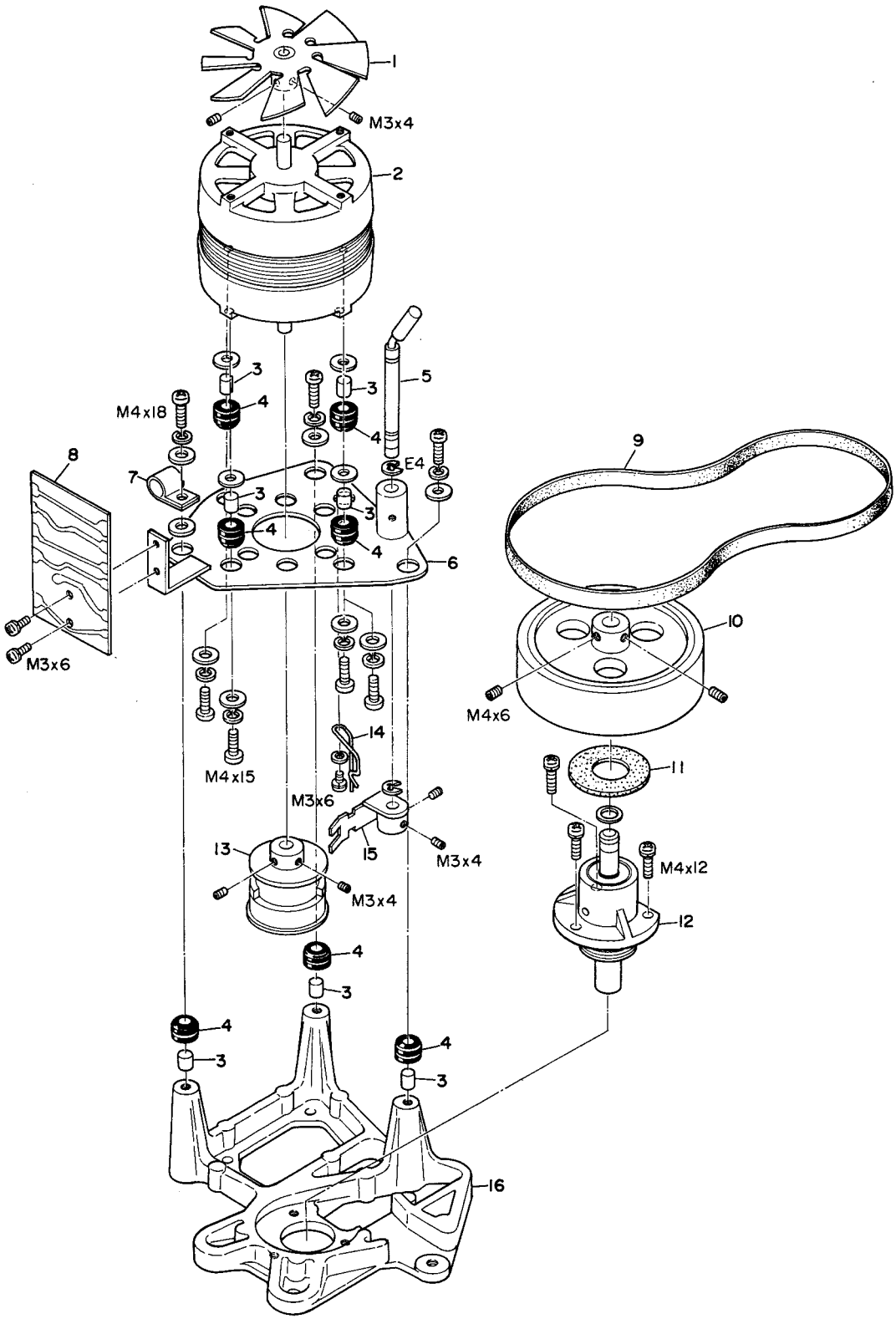


CAPSTAN DRIVE ASSY
A-7010GSL

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
6- 1	50124351	Fan		
6- 2	50277730	Retaining Ring (E Clip)		
6- 3	50706211	Cushion, Rubber		
6- 4	50124310	Plate, Motor Support		
6- 5	50241220	Stand-off, Capstan Motor		
6- 6	50241210	Spacer		
6- 7	50701170	Motor, Capstan		
6- 8	50122943	Shaft, Frequency Change		
6- 9	50124332	Plate, Capstan Motor		
6-10	50122950	Spring, Belt Change Lock		
6-11	50122772	Guide, Belt Change		
6-12	50124390	Pulley, Motor		
6-13	50122850	Belt, Capstan		
6-14	50489220	PC Board Assy, Spark-Killer		
6-15	50234721	Angle, Thrust		
6-16	50270771	Clamp, Wire		
6-17	50277230	Plate, Thrust		
6-18	50124220	Flywheel, Capstan		
6-19	50124180	Washer, Plastic		
6-20	50120360	Capstan Assy		
6-21	50122901	Capstan Assy Base		
6-22	50122550	Oil Pad Ring		

EXPLODED VIEW 7
A-7030GSL

CAPSTAN DRIVE ASSY
A-7030 GSL

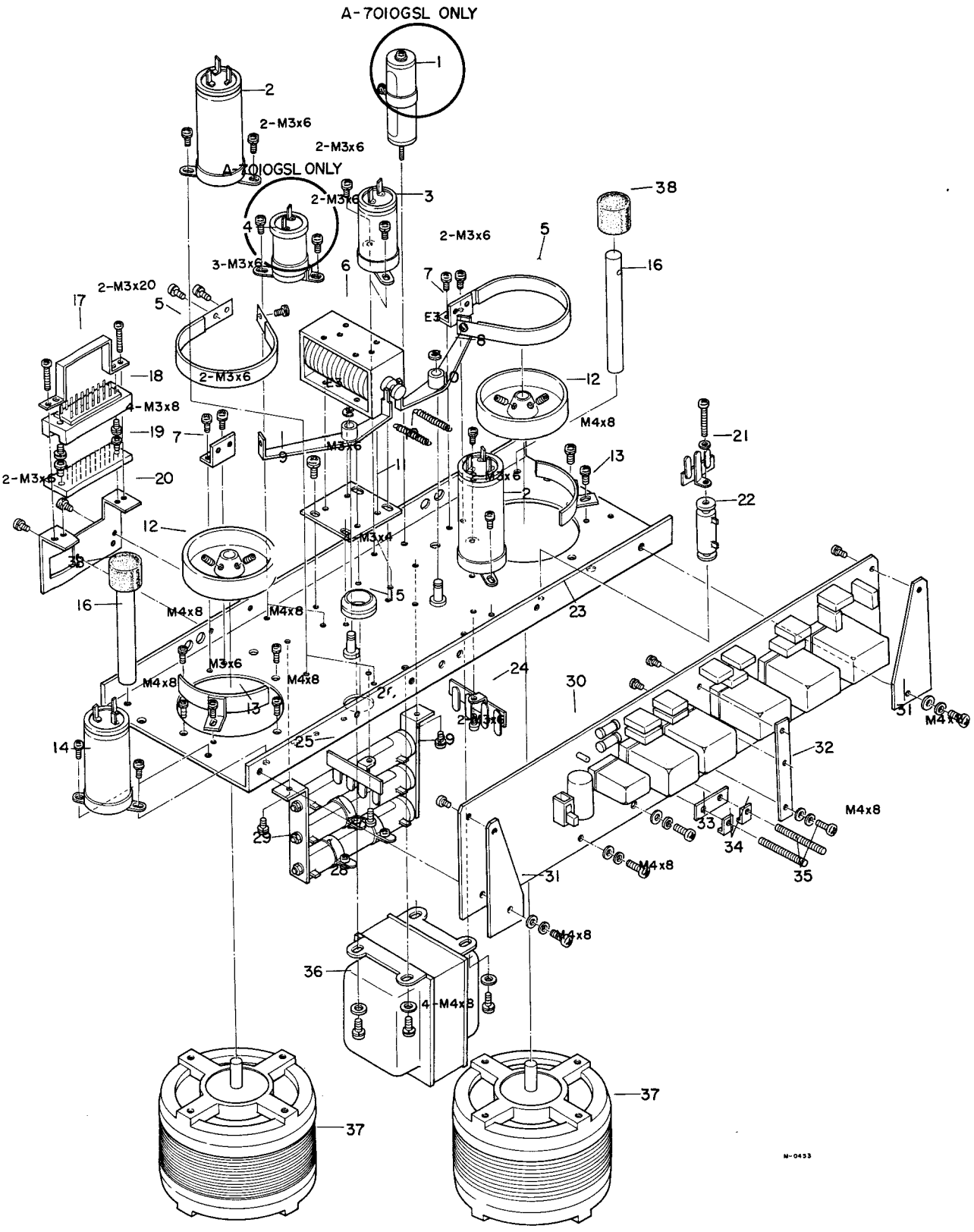


CAPSTAN DRIVE ASSY
A-7030 GSL

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
7- 1	50124351	Fan		
7- 2	50701170	Motor, Capstan		
7- 3	50241210	Spacer		
7- 4	50706211	Cushion, Rubber		
7- 5	50122943	Shaft, Frquency Change		
7- 6	50124332	Plate, Capstan Motor		
7- 7	50276280	Clamp, Wire, A		
7- 8	50489291	PC Board Assy, Spark-Killer		
7- 9	50122850	Belt, Capstan		
7-10	50124220	Flywheel, Capstan		
7-11	50122550	Oil Pad Ring		
7-12	50120350	Capstan Assy		
7-13	50124230	Pulley, Motor		
7-14	50122950	Spring, Belt Change Lock		
7-15	50122772	Guide, Belt Change		
7-16	50122901	Capstan Assy, Base		

EXPLODED VIEW 8
A-7010GSL A-7030GSL

REEL MOTOR ASSY

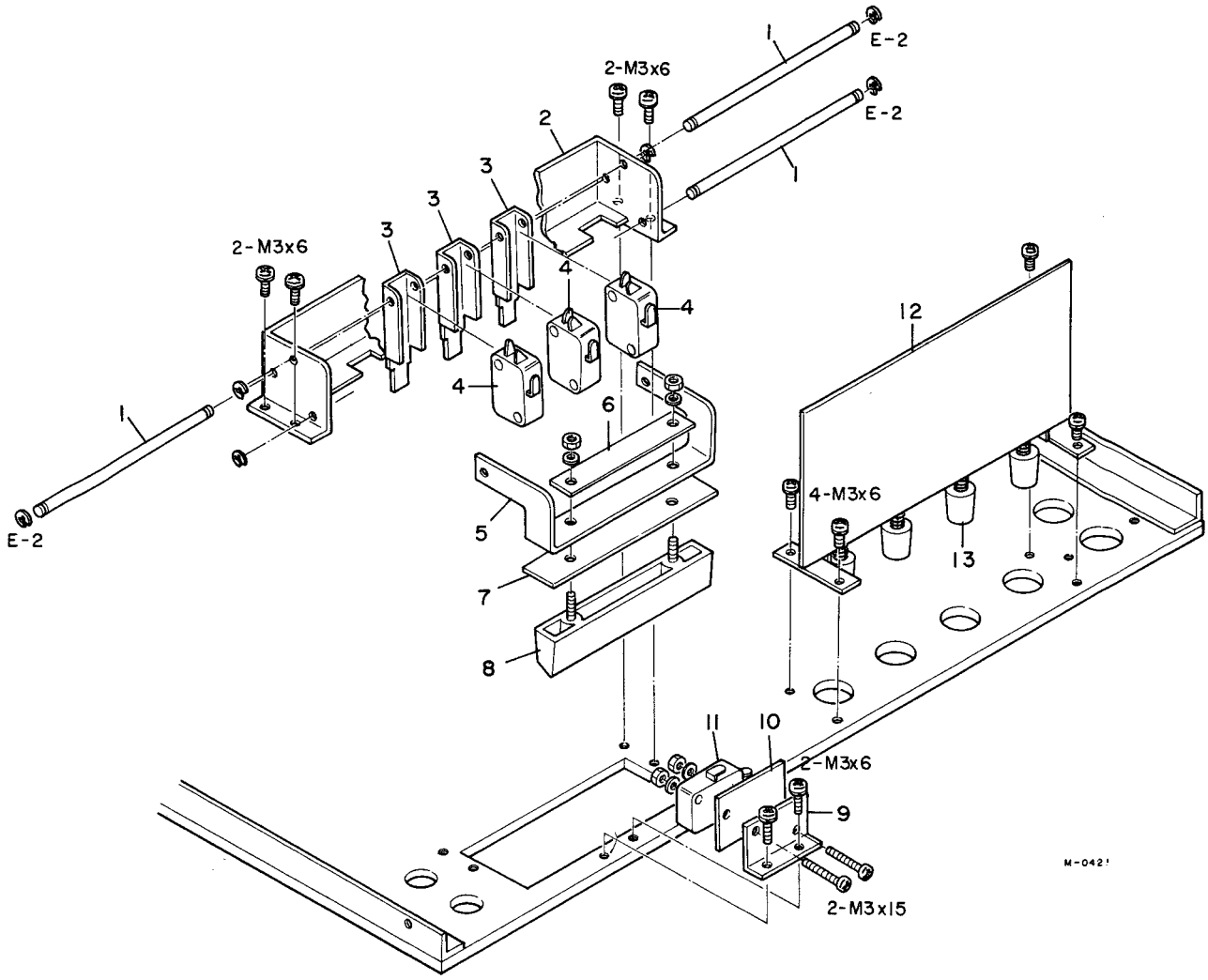


REEL MOTOR ASSY

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
8- 1	50524412	Resistor, Wire Wound 100Ω 30W (Used on A-7010GSL only)		
8- 2	50545680	Cap., MP 4+1μF (250V)		
8- 3	50551120	Cap., Elec. 100μF 160V		
8- 4	50551170	Cap., Elec. 1000μF 16V (Used on A-7010GSL only)		
8- 5	50172780	Brake Band		
	50277610	Felt		
8- 6	50616570	Solenoid, Brake		
8- 7	50172771	Bracket, Brake Band		
8- 8	50172810	Arm, Brake, L		
8- 9	50172790	Arm, Brake, R		
8-10	50172820	Spring, Brake		
8-11	50616423	Plate, Solenoid		
8-12	50172800	Brake Drum		
8-13	50172761	Brake Retainer		
8-14	50545310	Cap., MP 1+2.8μF (250V)		
8-15	50277710	Grommet		
8-16	50241203	Stand-off, Deck Support		
8-17	50287490	Connector Handle		
8-18	50436280	Socket, 34P Connector (DM,EX only)		
	50438290	Socket, 34P Connector (TCA only)		
8-19	50436480	Plug, 34P Connector (DM,EX only)		
	50436510	Plug, 34P Connector (TCA only)		
8-20	50234740	Plate, Connector		
8-21	50452060	Terminal Strip, 1L2P		
8-22	50524360	Resistor, Wire Wound 10Ω 5W		
8-23	50162831	Plate, Reel Motor		
8-24	50452010	Terminal Strip, 1L3P		
8-25	50452020	Terminal Strip, 1L3P		
8-26	50524402	Resistor, Wire Wound 1kΩ 40W		
8-27	50524382	Resistor, Wire Wound 400Ω 40W (A-7010GSL)		
	50524392	Resistor, Wire Wound 800Ω 40W (A-7030GSL)		
8-28	50524372	Resistor, Wire Wound 200Ω 40W		
8-29	50277660	Bracket, Resistor		
8-30	50489691	PC Board Assy, Control Relay (A-7010GSL)		
	50489700	PC Board Assy, Control Relay (A-7030GSL)		
8-31	50277630	Plate, Reinforcing		
8-32	50234790	Plate, Reinforcing		
8-33	50277641	Plate, Screw Guide		
8-34	50277370	Nut Plate		
8-35	50277360	Screw, Brake Adjustment		
8-36	50561890	Transformer, Power		
8-37	50702260	Motor, Reel (EM-115A)		
8-38	50321740	Rubber Foot		

EXPLODED VIEW 9
A-7010GSL A-7030GSL

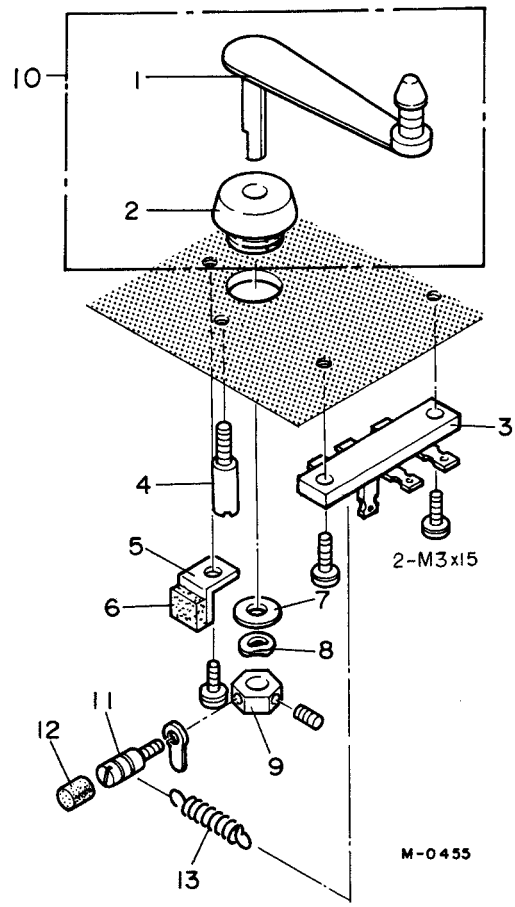
MODE CONTROL



MODE CONTROL

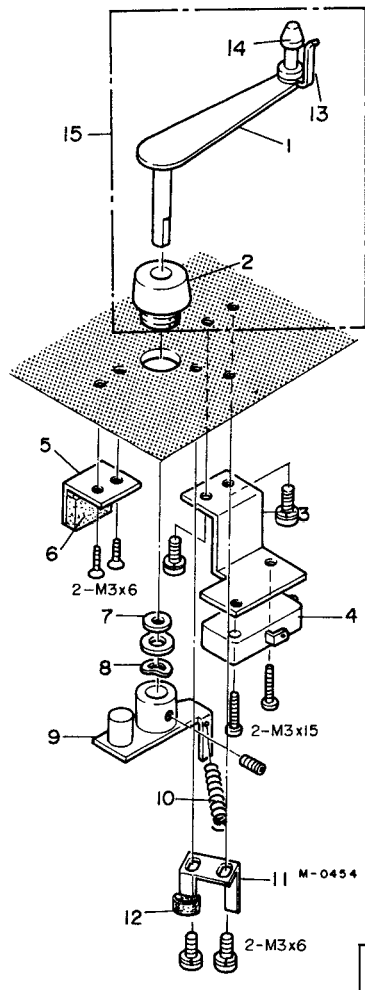
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
9- 1	50252301	Rod, SW Mount		
9- 2	50273050	Bracket, SW, A		
9- 3	50273070	Bracket, SW, C		
9- 4	50446090	SW, Micro		
9- 5	50273060	Bracket, SW, B		
9- 6	50273150	Bracket, SW, D		
9- 7	50273120	Cushion, Rubber		
9- 8	50252340	Push Button, Stop		
9- 9	50273040	Bracket, Micro SW		
9-10	50271790	Insulator Plate		
9-11	50446090	SW, Micro		
9-12	50443670	Push SW Assy		
	50443670	SW, Push		
9-13	50253500	Push Button, B		

LEFT TENSION ARM



REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
10- 1	50183021	Tension Arm, L		
10- 2	50182870	Bushing, Tension Arm L		
10- 3	50453160	Terminal Strip		
10- 4	50181360	Pin, Limit Stop		
10- 5	50111710	Bracket, Limit Stop		
10- 6	50277620	Cushion, Rubber		
10- 7	50182140	Washer, Thrust		
10- 8	50221200	Washer, Thrust		
10- 9	50277390	Nut		
10-10	50180620	Left Tension Arm Sub (C) Assy		
10-11	50123140	Pin, Spring Retainer		
10-12	50277400	Vinyl Tube		
10-13	50220030	Spring, Tension Arm		

RIGHT TENSION ARM

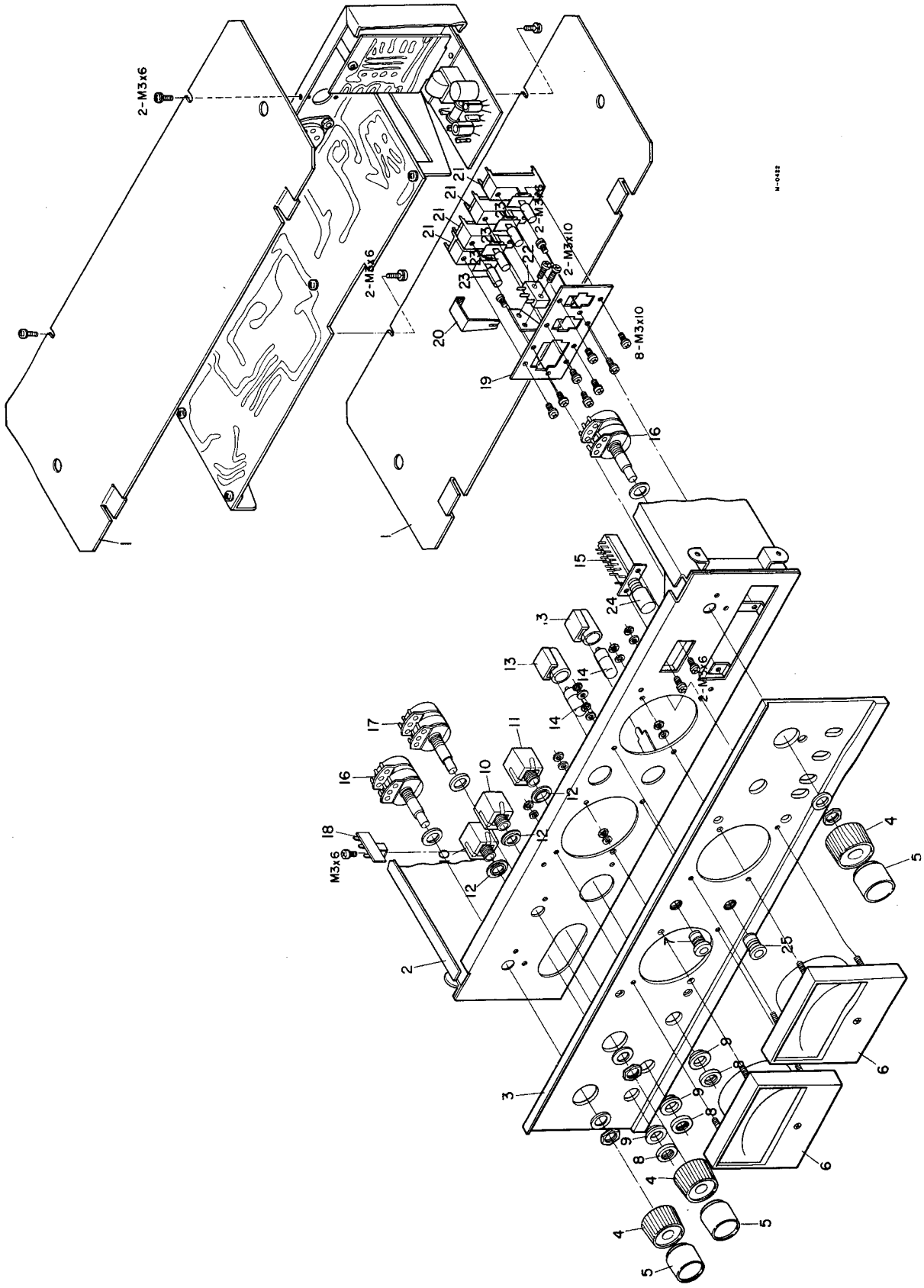


REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
11- 1	50182941	Tension Arm, R (A-7010GSL)		
	50182981	Tension Arm, R (A-7030GSL)		
11- 2	50181920	Bushing, Tension Arm R		
11- 3	50272951	Bracket, Micro SW		
11- 4	50446180	SW, Micro		
11- 5	50272940	Bracket, Magnet		
11- 6	50183900	Magnet		
11- 7	50182140	Washer, Thrust		
11- 8	50221200	Washer, Spring		
11- 9	50277412	Arm, Micro SW Actuator		
11-10	50182311	Spring, Tension Arm R		
11-11	50141561	Limit Stop, Tension Arm R		
11-12	50182950	Cushion, Rubber		
11-13	50182360	Guide, Tape		
11-14	50182340	Post, Tape Guide, L		
11-15	50180630	Right Tension Arm Sub (C) Assy (A-7010GSL)		
	50180640	Right Tension Arm Sub (C) Assy (A-7030GSL)		

EXPLODED VIEW 12

A-7010GSL A-7030GSL

PREAMPLIFIER CHASSIS-1

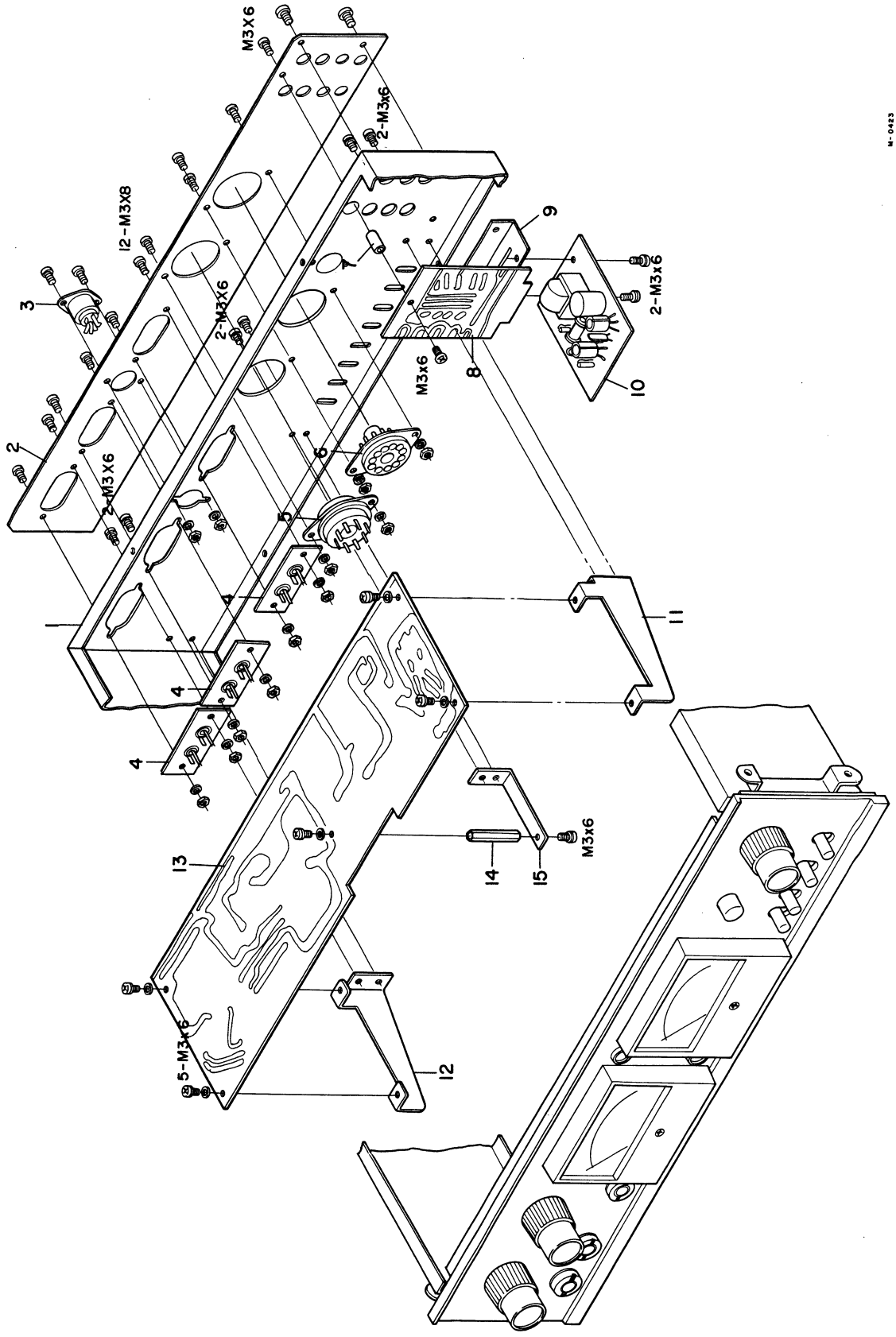


PREAMPLIFIER CHASSIS-1

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
12- 1	50233832	Cover, Ampl. Chassis		
12- 2	50234801	Chassis, Ampl.		
12- 3	50113910	Panel, Ampl. Trim		
12- 4	50252331	Knob, B (Inner)		
12- 5	50252261	Knob, A (Outer)		
12- 6	50581390	VU Meter		
12- 7	50415181	Pilot Holder, REC BIAS (Red)		
12- 8	50231951	Nut, Trim		
12- 9	50272620	Washer, Insulator, B		
12-10	50430240	Jack, Phone, Single (MIC)		
12-11	50432450	Jack, Phone, 3 Cond. (Headphone)		
12-12	50272620	Washer, Insulator, B		
12-13	50415250	Socket, Pilot Lamp		
12-14	50414580	Pilot Lamp, Bayonet Type (8V)		
12-15	50443630	SW, Push (Monitor)		
12-16	50537090	Potentiometer, 2 Gang, 100kΩ A		
12-17	50537100	Potentiometer, 2 Gang, 10kΩ A		
12-18	50452170	Terminal Strip, 1L2P		
12-19	50235221	Plate, Lever SW		
12-20	50235230	Bracket, Micro SW		
12-21	50937580	SW, Lever		
12-22	50446330	SW, Micro		
12-23	50253440	Knob, Lever SW		
12-24	50253500	Push Button, B		
12-25	50415190	Pilot Holder, REC EQ/LEVEL (Violet)		

EXPLODED VIEW 13
A-7010GSL A-7030GSL

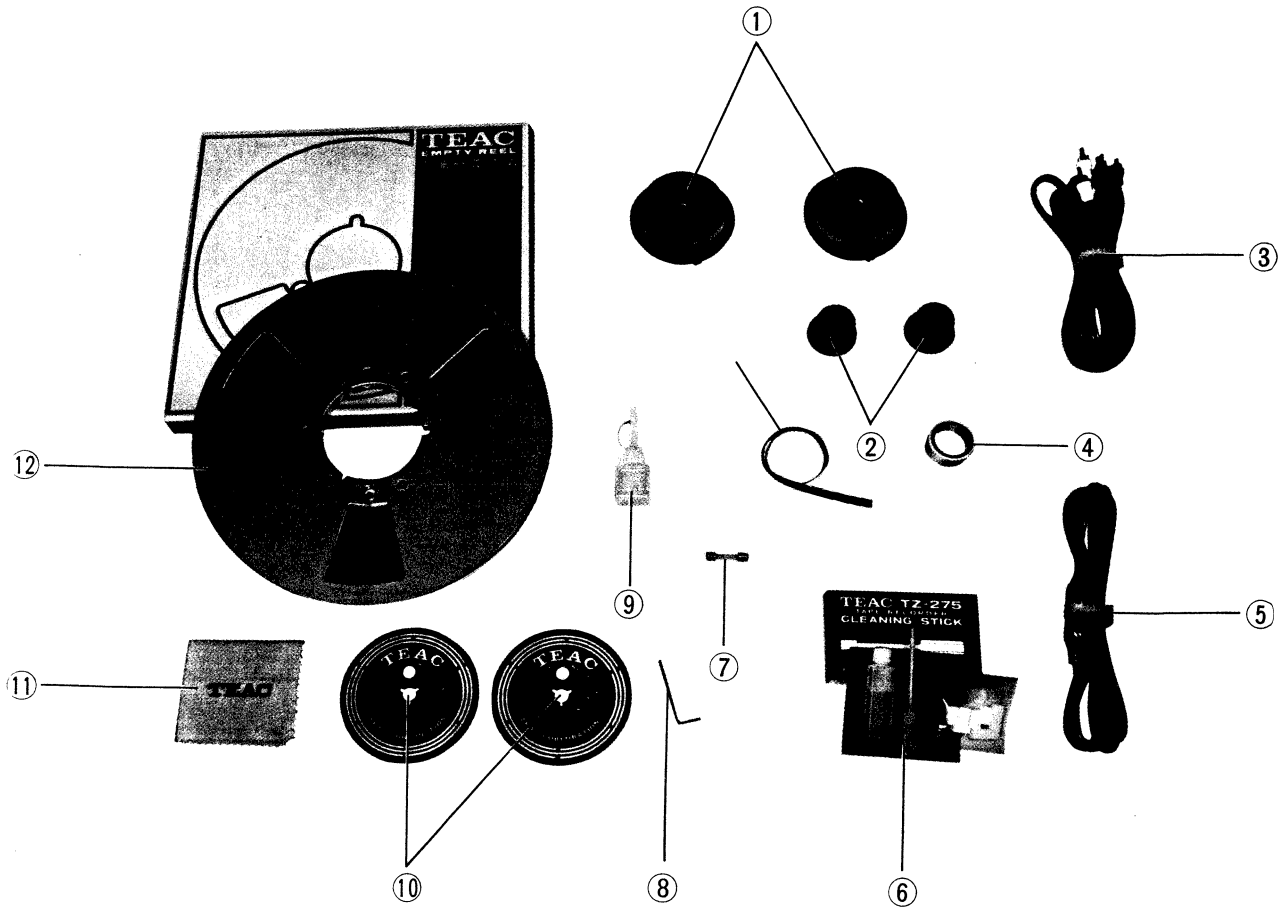
PREAMPLIFIER CHASSIS-2



PREAMPLIFIER CHASSIS-2

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
13- 1	50234801	Chassis, Ampl.		
13- 2	50113251	Panel, Ampl. Trim		
13- 3	50430010	Connector, DIN		
13- 4	50434631	Jack, Pin, 2P		
13- 5	50434650	Socket, 8P (Female)		
13- 6	50432340	Socket, 11P (Male)		
13- 7	50241730	Spacer		
13- 8	50489320	PC Board Assy, Bias Adjust		
13- 9	50234880	Angle, OSC Assy		
13-10	50489300	PC Board Assy, Bias OSC		
13-11	50234850	Bracket, A		
13-12	50234860	Bracket, B		
13-13	50489311	PC Board Assy, Record/PB		
13-14	50241720	Stand-off		
13-15	50231930	Bracket, C		

STANDARD ACCESSORIES



REF. NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
14- 1	50162040	Reel Holders (TZ-610), ×2		
14- 2	50161580	Reel Holders, ×2		
14- 3	50471250	Input Output Connection Cords, ×2		
14- 4	50862030	Splicing Tape		
14- 5	50470771	AC Power Cord (DM,EX)		
	50470501	AC Power Cord (TCA only)		
14- 6	57100300	Cleaning Stick (TZ-275)		
14- 7	50411140	Fuse, 2A, ×2 (EX, TCA)		
14- 8	50860010	Hex Wrench, M3 (EX, TCA)		
	50860020	Hex Wrench, M4 (EX, TCA)		
14- 9		Oil		
14-10	50162170	Reel Adjusting Disc, ×2 (TZ-611)		
14-11	50292260	Silicone Cloth		
14-12	50162040	Empty Reel, 10 inch (RE-1002)		

A-7010GS

A-7030GS

PRINTED CIRCUIT BOARD AND PARTS LIST

A-7010 GSL/A-7030 GSL

REPLACEMENT INFORMATION

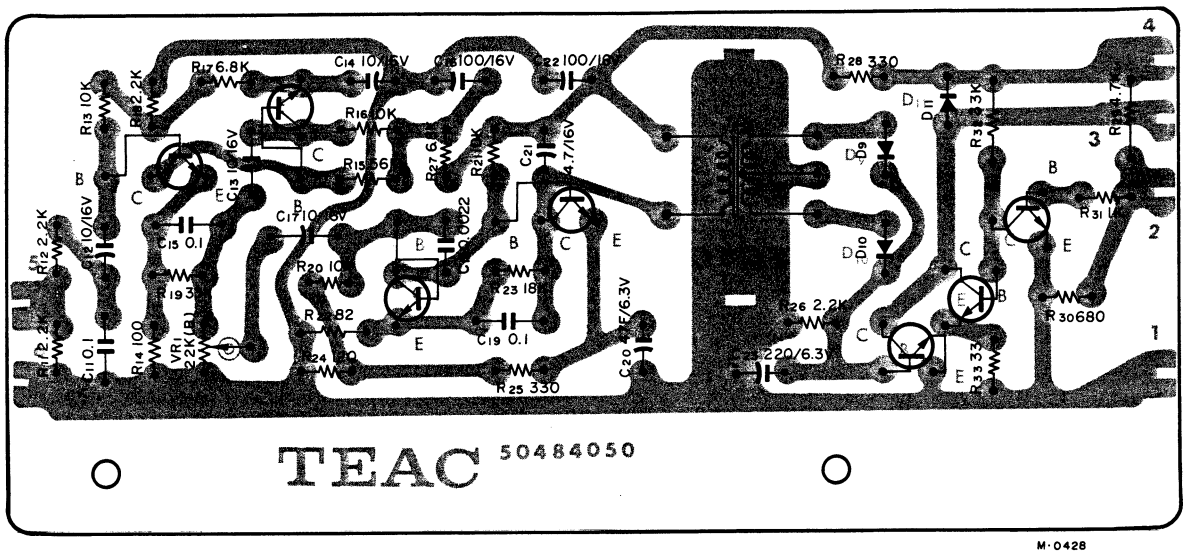
Replacement parts are available through your nearest TEAC dealer or directly from the TEAC office.
Changes are constantly being made to make TEAC products better and more reliable.
Therefore, when ordering parts, always include the following information:

MODEL *SERIAL NO.* *REF.NO.* *PARTS NO.* *DESCRIPTION*

TEAC CORPORATION

P.S. AMPLIFIER (PHASE SENSING AMPL.)

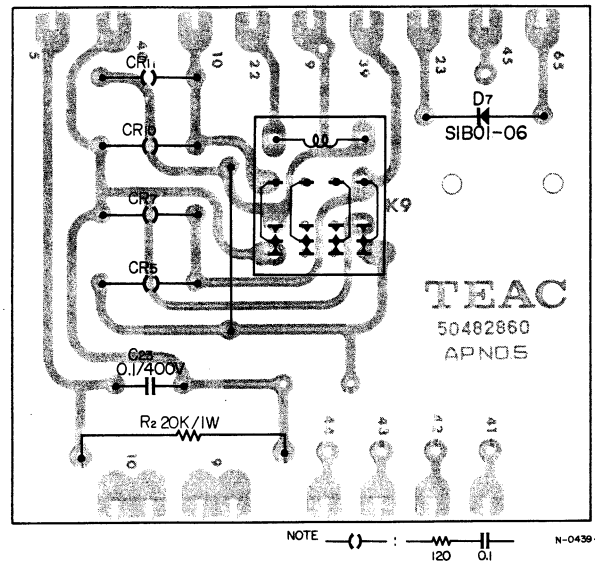
A-7010GSL



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50491040	PC Board Assy, P.S. Ampl.		
	50484050	PC Board		
D11	50422560	Diode, SIB01-02		
D9·10	50422130	Diode, (or IN-60)		
T1	50562100	Transformer, Output		
Q1	50423300	Transistor 2SC693F or		
	50423510	Transistor 2SC733(Y)		
Q2∿4	50423830	Transistor 2SC536F or		
	50423510	Transistor 2SC733(Y)		
Q5	50423850	Transistor 2SC971		
R11·12·18·26	50515380	Resistor, Carbon 2.2kΩ 1/4W		
R13·16·20·21	50515490	Resistor, Carbon 10kΩ 1/4W		
R14	50515640	Resistor, Carbon 100Ω 1/4W		
R15	50515610	Resistor, Carbon 56kΩ 1/4W		
R17·27	50515470	Resistor, Carbon 6.8kΩ 1/4W		
R19	50515570	Resistor, Carbon 33kΩ 1/4W		
R22	50515630	Resistor, Carbon 82Ω 1/4W		
R23	50515520	Resistor, Carbon 18kΩ 1/4W		
R25·28	50515280	Resistor, Carbon 330Ω 1/4W		
R24	50515230	Resistor, Carbon 120Ω 1/4W		
R29	50515170	Resistor, Carbon 33Ω 1/4W		
R30	50515320	Resistor, Carbon 680Ω 1/4W		
R31	50515340	Resistor, Carbon 1kΩ 1/4W		
R32	50515460	Resistor, Carbon 4.7kΩ 1/4W		
R33	50515570	Resistor, Carbon 33kΩ 1/4W		
VR1	50533560	Trimmer Resistor 22kΩ B		
C23	50554330	Capacitor, Elec. 220μF 6.3V		
C16·22	50554200	Capacitor, Elec. 100μF 16V		
C20	50554030	Capacitor, Elec. 47μF 6.3V		
C12·13·14·17	50554050	Capacitor, Elec. 10μF 16V		
C11·15·19	50548040	Capacitor, Mylar 0.1μF 50V		
C18	50548220	Capacitor, Mylar 0.0022μF 150V		
C21	50546170	Capacitor, Tantalum 4.7μF 16V		

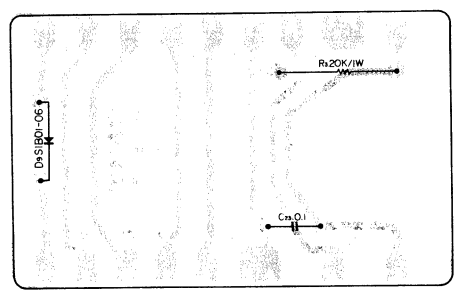
SPARK KILLER ASSY

A-7010GSL



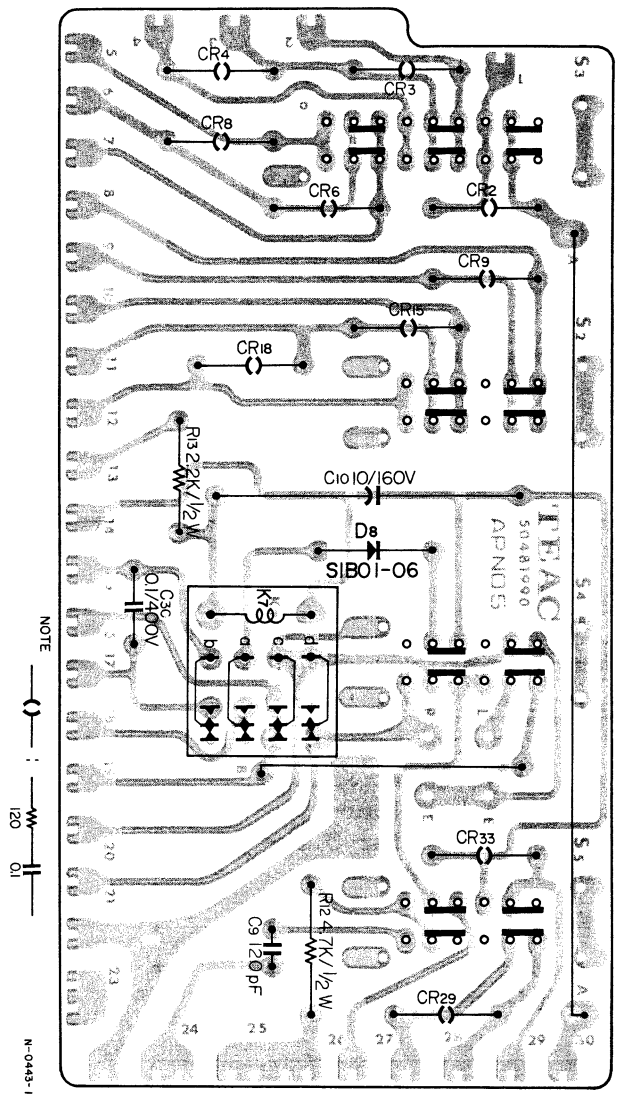
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489220	PC Board Assy, Spark Killer		
	50482860	PC Board, Spark Killer		
C23	50548390	Cap., Metalized Mylar 0.1μF 400V		
R2	50526220	Resistor, Carbon 20kΩ 1W		
CR5·7·9·10	50529050	Spark Killer 0.1μF + 120Ω		
D7	50422570	Diode, SIB01-06		
K9	50610770	Relay, Miniature DC 100V		

A-7030GSL



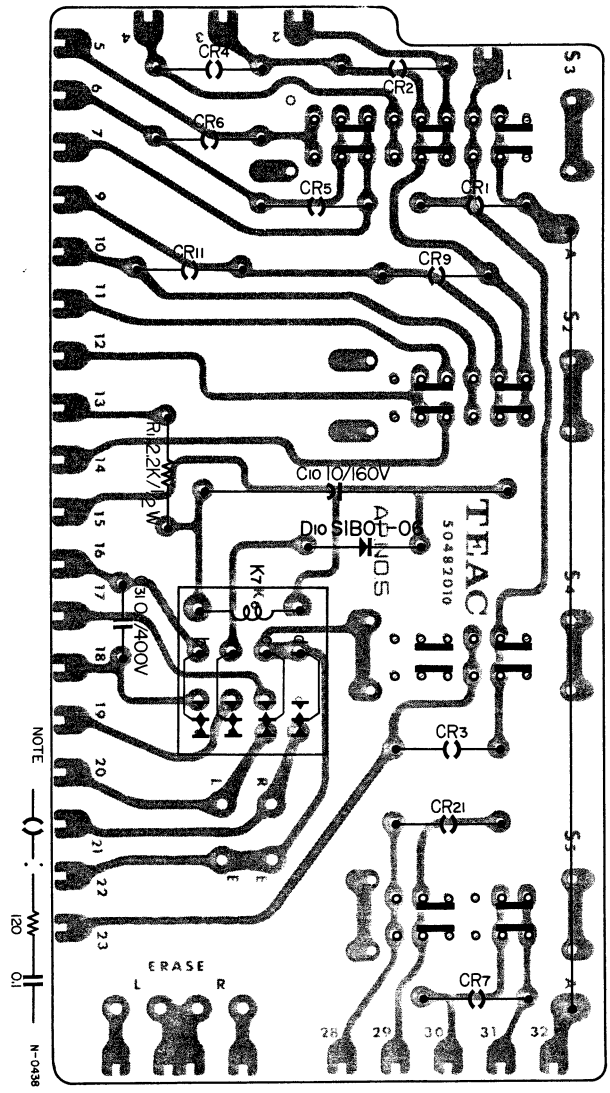
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489291	PC Board Assy, Spark Killer		
	50482971	PC Board, Spark Killer		
C23	50548390	Cap., Metalized Mylar 0.1μF 400V		
	50526220	Resistor, Carbon 20kΩ 1W		
D9	50422570	Diode, SIB01-06		

RECORD RELAY ASSY
A-7010GSL



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489270	PC Board Assy, Record Relay		
	50481990	PC Board, Record Relay		
	50443670	Push SW Assy		
K7	50610730	Relay, DC 100V		
C10	50555450	Cap., Elec. 10μF 160V		
C30	50548390	Cap., Metalized Mylar 0.1μF 400V		
C9	50544140	Cap., Polyst. 120pF 125V		
R13	50516380	Resistor, Carbon 2.2kΩ 1/2W		
R12	50516440	Resistor, Carbon 4.7kΩ 1/2W		
D8	50442570	Diode, SIB01-06		
	50529050	Spark Killer 0.1μF + 120Ω, ×10		

RECORD RELAY ASSY
A-7030 GSL

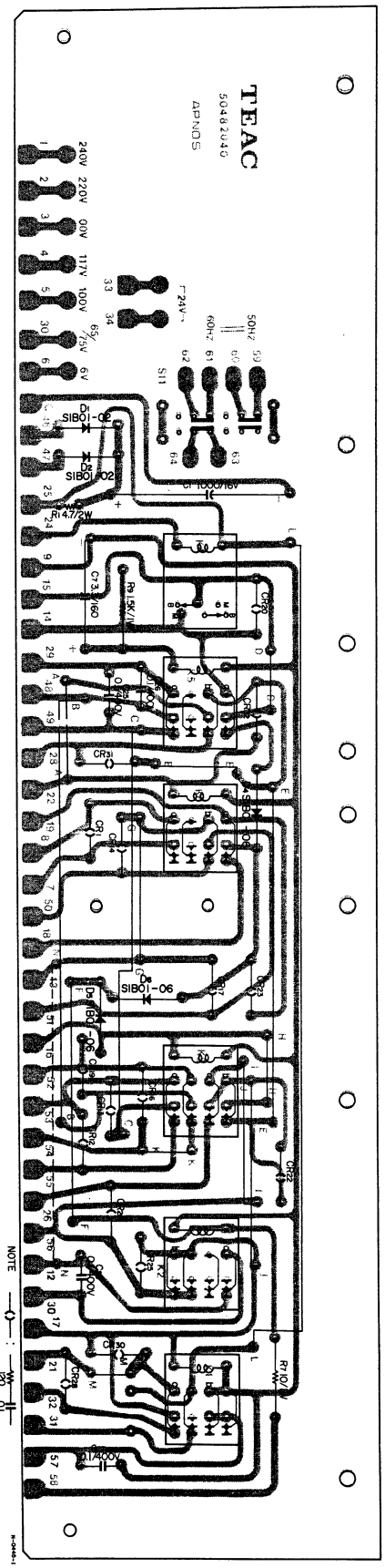


CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489340	PC Board Assy, Record Relay		
	50482010	PC Board, Record Relay		
	50443670	Push SW Assy		
K7	50610730	Relay, DC 100V		
C10	50555450	Cap., Elec. 10μF 160V		
C31	50548390	Cap., Metalized Mylar 0.1μF 400V		
R11	50516380	Resistor, Carbon 2.2kΩ 1/2W		
D10	50442570	Diode, SIB01-06		
	50529050	Spark Killer 0.1μF + 120Ω, ×10		

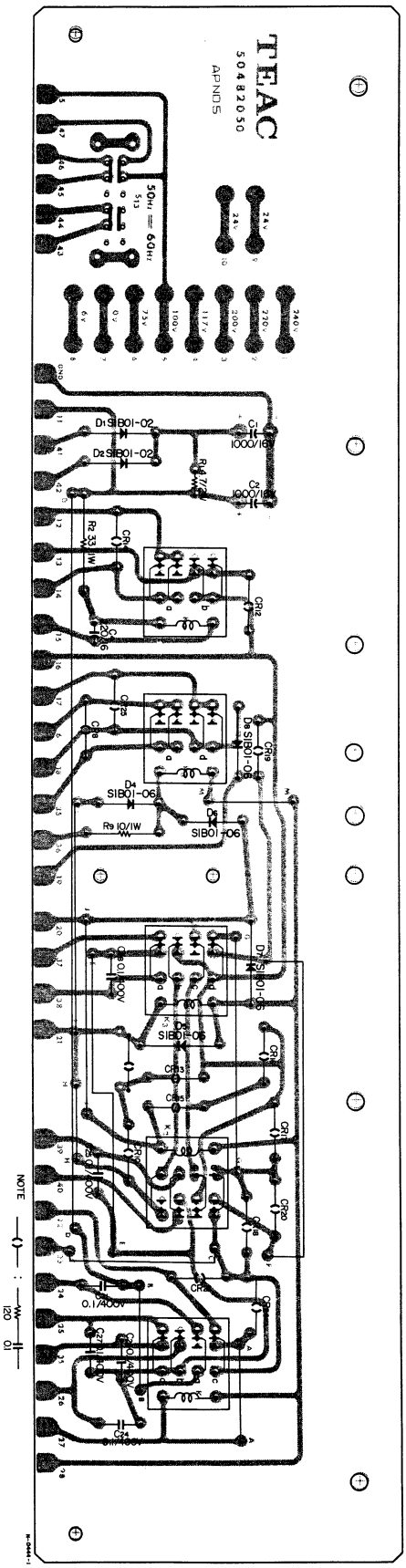
PC BOARD
A-7010GSL/A-7030GSL

CONTROL RELAY ASSY

A-7010 GSL



A-7030 GSL



CONTROL RELAY ASSY

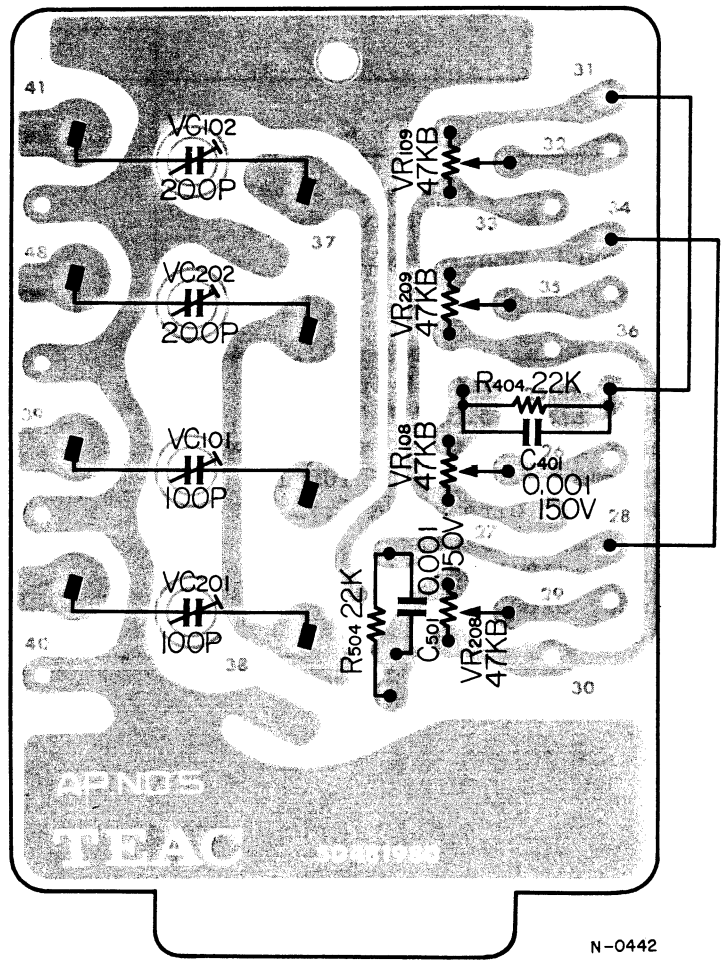
A-7010GSL

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489331	PC Board Assy, Control Relay		
	50489691	PC Board Assy, Control Relay		
	50482040	PC Board, Control Relay		
K1∿3·5·6	50610770	Relay, DC 100V		
K4	50610780	Relay, DC 12V		
C24∿27	50548390	Cap., Metalized Mylar 0.1μF 400V		
C1	50555160	Cap., Elec. 1000μF 16V		
C7	50555360	Cap., Elec. 3.3μF 160V		
	50529050	Spark Killer, 0.1μF + 120Ω, ×16		
R7	50525100	Resistor, Wire Wound 10Ω 1W		
R1	50525920	Resistor, Wire Wound 4.7Ω 1W		
R9	50527010	Resistor, 1.5kΩ 1W		
D4∿6	50422570	Diode, SIB01-06		
D1·2	50422560	Diode, SIB01-02		
S11	50444280	SW, Slide		

A-7030GSL

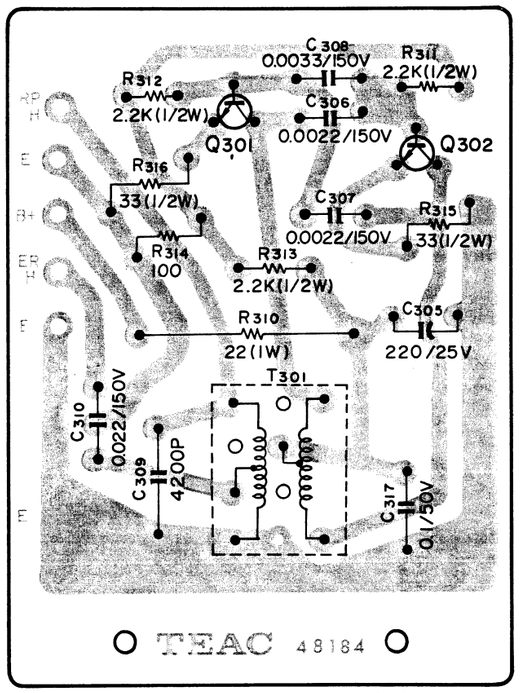
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489700	PC Board Assy, Control Relay		
	50482050	PC Board, Control Relay		
K1∿3·6	50610770	Relay, DC 100V		
K4	50610830	Relay, DC 12V		
C21·24∿28	50548390	Cap., Metalized Mylar 0.1μF 400V		
C1·2	50554890	Cap., Elec. 1000μF 16V		
C4	50554390	Cap., Elec. 220μF 16V		
≃	50529050	Spark Killer, 0.1μF + 120Ω, ×15		
R9	50525100	Resistor, Wire Wound 10Ω 1W		
R1	50525920	Resistor, Wire Wound 4.7Ω 1W		
R2	50525940	Resistor, Wire Wound 33Ω 1W		
D4∿8	50422570	Diode, SIB01-06		
D1·2	50422560	Diode, SIB01-02		
S13	50444280	SW, Slide		

BIAS ADJUST ASSY



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489320	PC Board Assy, Bias Adjust		
	50481980	PC Board, Bias Adjust		
VR108/208	50533520	Trimmer Resistor 47kΩ B		
VR109/209	50533520	Trimmer Resistor 47kΩ B		
VC101/201	50547040	Trimmer Capacitor 100pF		
VC102/202	50547050	Trimmer Capacitor 200pF		
C401/501	50548820	Cap., Mylar 0.001μF 150V		
R404/504	50517100	Resistor, Carbon 22kΩ 1/8W		

BIAS OSCILLATOR

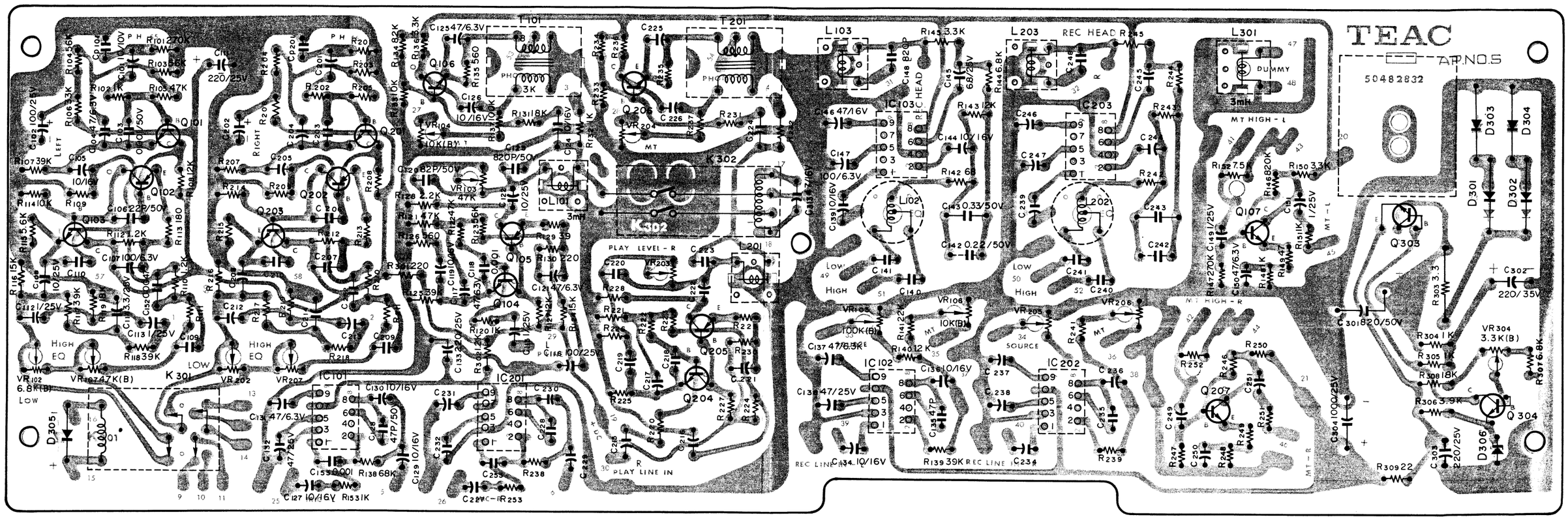


M-0456

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489300	PC Board Assy, Bias OSC		
	50481840	PC Board, Bias OSC		
T301	50563170	Transformer, Oscillator		
Q301·302	50423850	Transistor, Silicon 2SC971 (with Heat Sink)		
R310	50525950	Resistor, Wire Wound 22Ω 1W		
R311·312	50514920	Resistor, Carbon 2.2kΩ 1/2W		
R313	50514920	Resistor, Carbon 2.2kΩ 1/2W		
R314	50515220	Resistor, Carbon 100Ω 1/4W		
R315·316	50514990	Resistor, Carbon 33Ω 1/2W		
C305	50554180	Cap., Elec. 220μF 25V		
C306·307	50548790	Cap., Mylar 0.0022μF 150V		
C308	50548530	Cap., Mylar 0.0033μF 150V		
C309	50544040	Cap,, Mica 4200pF 250V		
C310	50548740	Cap., Mylar 0.022μF 150V		
C317	50548040	Cap., Mylar 0.1μF 50V		

PC BOARD
A-6010GSL/A-7010GSL/A-7030GSL

PREAMPLIFIER



M-0457

CIRCUIT REF.NO.	DESCRIPTION
Q101/201	2SC1000BL
Q102/202	2SA666I(S) or 2SA572YL4
Q103/203	2SC536F
Q104/204	2SC693Fα
Q105/205	2SA666I(S) or 2SA494Y
Q106/206	2SC828R(or S) or 2SC733Y
Q107/207	2SC536F or 2SC828R(or S) or 2SC733Y
Q303	2SD2350 or 2SC1226AQ
Q304	2SC733Y
IC101/201	TEAC-42709 (LD-3120)
IC102/202	TEAC-42709 (LD-3120)
IC103/203	TEAC-42710 (LD-3141)

PB EQ

CIRCUIT REF.NO.	A-6010GSL A-7010GSL	A-7030GSL
R109/209	470Ω	560Ω
R111/211	150kΩ	180kΩ
C109/209	0.022μF	0.015μF
C110/210	0.0027μF	560pF
C152/252	0.0047μF	.....

REC EQ

CIRCUIT REF.NO.	A-6010GSL A-7010GSL	A-7030GSL
C140/240	0.015μF/50V	0.0047μF/50V
C141/241	0.033μF/50V	0.015μF/50V

PREAMPLIFIER

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
	50489311	PC Board Assy, Preampl.		
	50482831	PC Board, Preampl.		
	50234870	Heat Sink		
K301	50610850	Relay, DC 12V		
K302	50610870	Relay, 12V		
T101/201	50562141	Transformer, Headphone 3kΩ:8Ω or		
	50563270	Transformer, Headphone 3kΩ:8Ω		
	50270160	Cushion, Rubber		
		SILICON TRANSISTORS		
Q101/201	50424340	2SC1000-BL		
Q102/202	50424210	2SA666-I(S) or		
	50424140	2SA572-YL4		
Q103/203	50423830	2SC536-F		
Q104/204	50424180	2SC693Fα		
Q105/205	50424210	2SA666-I(S) or		
	50423650	2SA494-Y		
Q106/206	50423620	2SC828R (or S) or		
	50423510	2SC733Y		
Q107/207	50423830	2SC536F or		
	50423620	2SC828R (or S) or		
	50423510	2SC733Y		
Q303	50423800	2SD235-O or		
	50424190	2SC1226A-Q		
Q304	50423510	2SC733Y		
		INTEGRATED CIRCUITS		
IC101/201	50427090	TEAC-42709 (LD-3120)		
IC102/202	50427090	TEAC-42709 (LD-3120)		
IC103/203	50427100	TEAC-42710 (LD-3141)		
		DIODES		
D301∿305	50422560	SIB01-02		
D306	50422580	Zener 0.2Z6.2A		
		COILS		
L101/201	50566300	Trap 3mH		
L102/202	50566370	Record Compensation 4.2/2.4mH		
L103/203	50566300	Trap 3mH		
L301	50566581	Dummy Load 3mH		

PREAMPLIFIER (CONTINUED)

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
		CARBON RESISTORS		
		ALL RESISTORS IN OHMS, 10% TOLERANCE 1/4 WATTS AND FIXED CARBON FILM TYPE UNLESS OTHERWISE NOTED.		
R101/201	50515700	270k		
R102/202	50515340	1k		
R103/203	50515610	56k		
R104/204	50515610	56k		
R105/205	50515590	47k		
R106/206	50515570	33k		
R107/207	50515580	39k		
R108/208	50515500	12k		
R109/209	50515300	470 (A-7010GSL only)		
	50515310	560 (A-7030GSL only)		
R110/210	50515350	1.2k		
R111/211	50515660	150k (A-7010GSL only)		
	50515670	180k (A-7030GSL only)		
R112/212	50515350	1.2k		
R113/213	50515250	180		
R114/214	50515490	10k		
R115/215	50515460	5.6k		
R116/216	50515510	15k		
R117/217	50515580	39k		
R118/218	50515580	39k		
R119/219	50515520	18k		
R120/220	50515340	1k		
R121/221	50519810	47k		
R122/222	50515590	47k		
R123/223	50515610	56k		
R124/224	50515510	15k		
R125/225	50515580	39k		
R126/226	50515310	560		
R127/227	50515500	12k		
R128/228	50515380	2.2k		
R129/229	50515160	39		
R130/230	50515260	220		
R131/231	50515520	18k		
R132/232	50515340	1k		
R133/233	50515490	10k		
R134/234	50515630	82k		
R135/235	50515310	560		
R136/236	50515410	3.3k		
R137/237	50515640	100k		
R138/238	50515620	68k		
R139/239	50515580	39k		
R140/240	50515640	100k		
R141/241	50515540	22k		
R142/242	50515200	68		

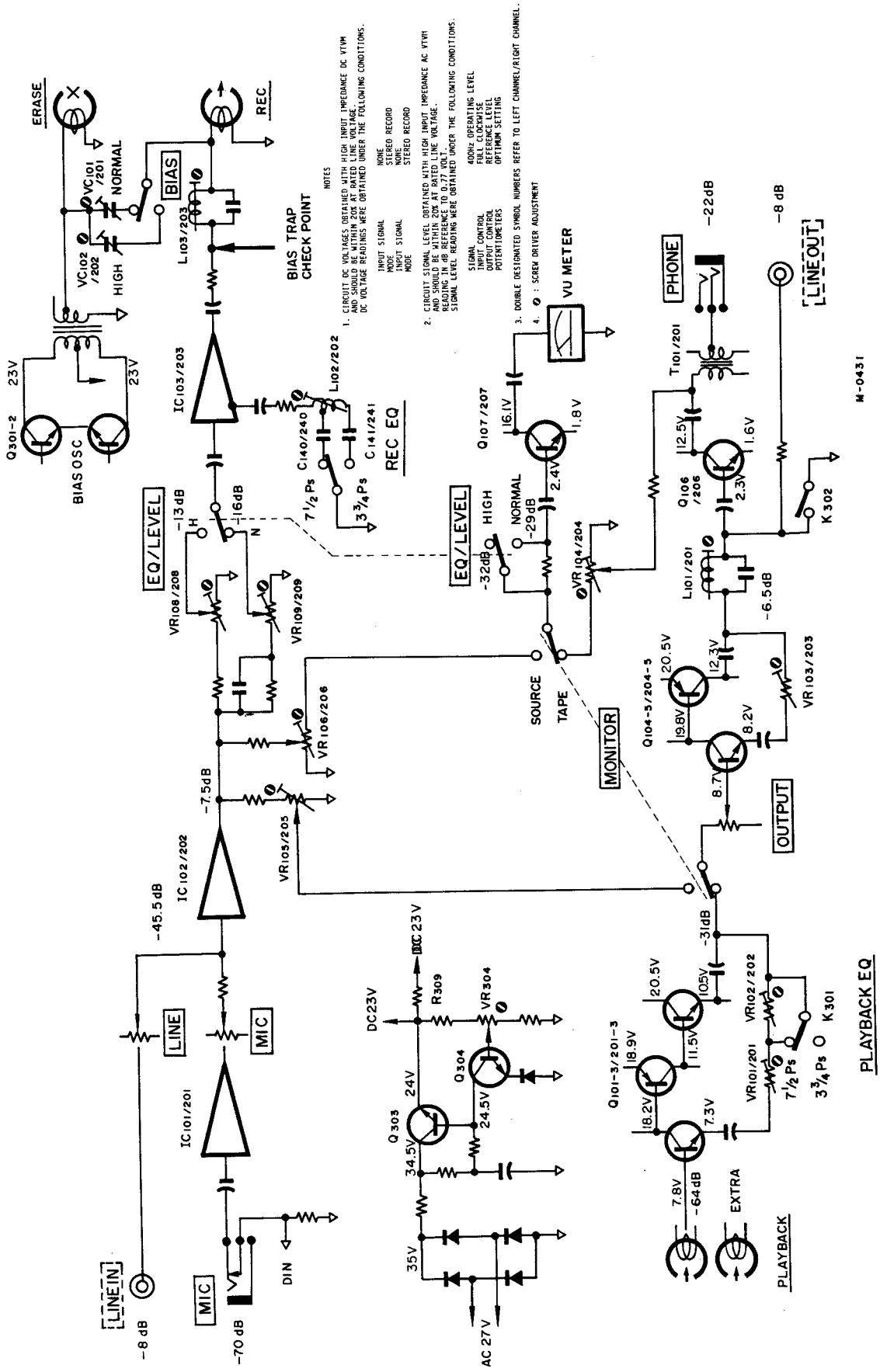
PREAMPLIFIER (CONTINUED)

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
R143/243	50515500	12k		
R144/244	50515470	6.8k		
R145/245	50515380	2.2k		
R146/246	50517700	820k		
R147/247	50515700	270k		
R148/248	50515340	1k		
R149/249	50515170	47		
R150/250	50515410	3.3k		
R151/251	50515340	1k		
R152/252	50571030	7.5k		
R153/253	50515340	1k		
R301	50515260	220		
R302	50515350	1.2k		
R303	50525930	Wire Wound 3.3 1W		
R304	50515340	1k		
R305	50515340	1k		
R306	50515430	3.9k		
R307	50515470	6.8k		
R308	50515520	18k		
R309	50515130	22		
		TRIMMER RESISTORS		
VR101/201	50533460	4.7kΩ B		
VR102/202	50533580	6.8kΩ B		
VR103/203	50533520	47kΩ B		
VR104/204	50533480	10kΩ B		
VR105/205	50533560	22kΩ B		
VR106/206	50533480	10kΩ B		
VR304	50533640	2.2kΩ B		
		CAPACITORS		
		ALL CAPACITORS IN MICRO FARADS UNLESS OTHERWISE NOTED.		
C101/201	50546190	Tantalum 10 10V		
C102/202	50554170	Elec. 100 25V		
C103/203	50548780	Mylar 0.001 50V		
C104/204	50554030	Elec. 47 6.3V		
C105/205	50554270	Elec. 10 16V		
C106/206	50544080	Polyst. 22pF 50V		
C107/207	50554230	Elec. 100 6.3V		
C108/208	50557090	Elec. 10 25V		
C109/209	50548290	Mylar 0.022 50V (A-7010GSL)		
	50548420	Mylar 0.015 50V (A-7030GSL)		
C110/210	50549420	Mylar 0.0027 (A-7010GSL only)		
	50544090	Polyst. 560pF (A-7030GSL only)		
C111/211	50554180	Elec. 220 25V		

PREAMPLIFIER (CONTINUED)

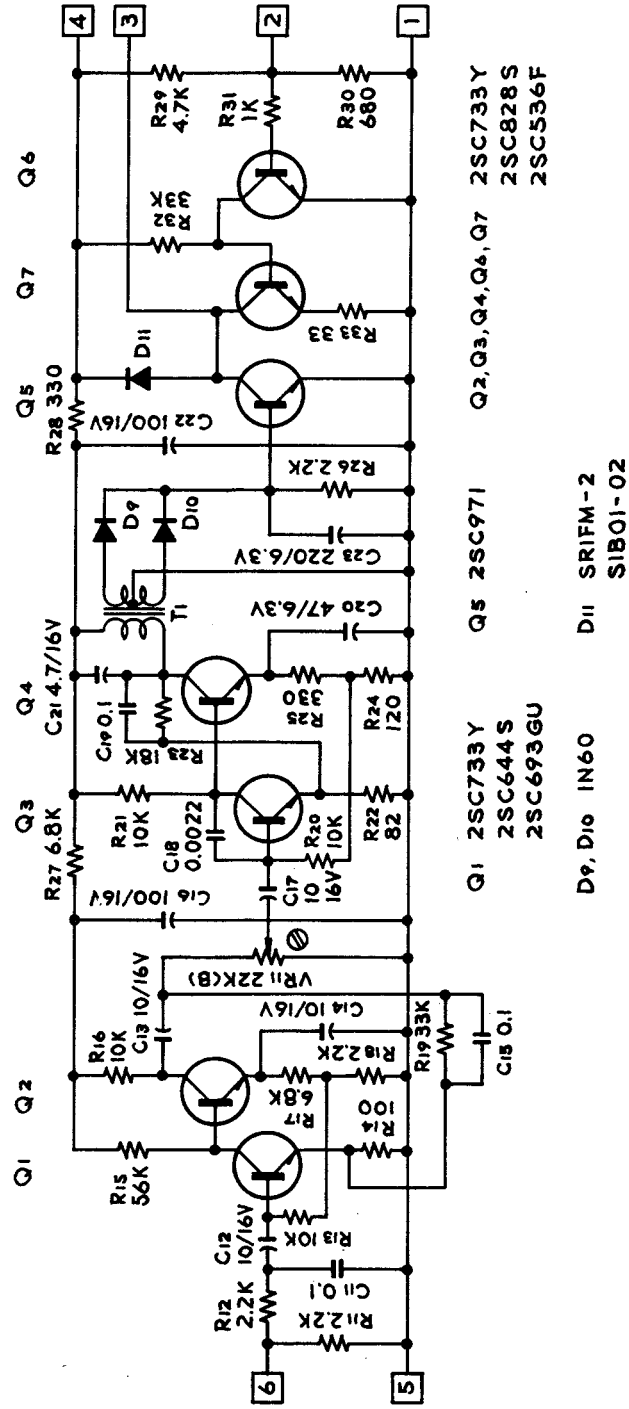
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	REVISION 1st	REVISION 2nd
C112/212	50546120	Tantalum 1 25V		
C113/213	50546120	Tantalum 1 25V		
C114/214	50546220	Tantalum 3.3 25V		
C115/215	50549660	Elec. 1 25V		
C116/216	50554170	Elec. 100 25V		
C117/217	50554030	Elec. 47 6.3V		
C118/218	50548780	Mylar 0.001 50V		
C119/219	50554050	Elec. 10 16V		
C120/220	50544100	Polyst. 82pF 50V		
C121/221	50554030	Elec. 47 6.3V		
C122/222	50557090	Elec. 10 25V		
C123/223	50544120	Polyst. 820pF 50V		
C124/224	50554050	Elec. 10 16V		
C125/225	50554030	Elec. 47 6.3V		
C126/226	50554050	Elec. 10 16V		
C127/227	50554050	Elec. 10 16V		
C128/228	50544110	Polyst. 47pF 50V		
C129/229	50554050	Elec. 10 16V		
C130/230	50554050	Elec. 10 16V		
C131/231	50554030	Elec. 47 6.3V		
C132/232	50554490	Elec. 47 25V		
C133/233	50554180	Elec. 220 25V		
C134/234	50554050	Elec. 10 16V		
C135/235	50544110	Polyst. 47pF 50V		
C136/236	50554050	Elec. 10 16V		
C137/237	50554030	Elec. 47 6.3V		
C138/238	50554490	Elec. 47 25V		
C139/239	50554050	Elec. 10 16V		
C140/240	50548420	Mylar 0.015 50V (A-7010GSL)		
	50548130	Mylar 0.0047 50V (A-7030GSL)		
C141/241	50548240	Mylar 0.033 50V (A-7010GSL)		
	50548420	Mylar 0.015 50V (A-7030GSL)		
C142/242	50548680	Mylar 0.33 50V		
C142'/242'	50548660	Mylar 0.22 50V		
C144/244	50554050	Elec. 10 16V		
C145/245	50546200	Tantalum 10 25V		
C146/246	50554770	Elec. 47 16V		
C147/247	50554230	Elec. 100 6.3V		
C148/248	50544120	Polyst. 820pF 50V		
C149/249	50554810	Elec. 1 25V		
C150/250	50554030	Elec. 47 6.3V		
C151/251	50546701	Dipped Tantalum 1 35V		
C152/252	50548131	Mylar 0.0047 (A-7010GSL only)		
C153/253	50548320	Mylar 0.001		
C301	50557081	Elec. 820 50V		
C302	50554800	Elec. 220 35V		
C303	50554180	Elec. 220 25V		
C304	50557051	Elec. 1000 25V		
C313	50554770	Elec. 47 16V		

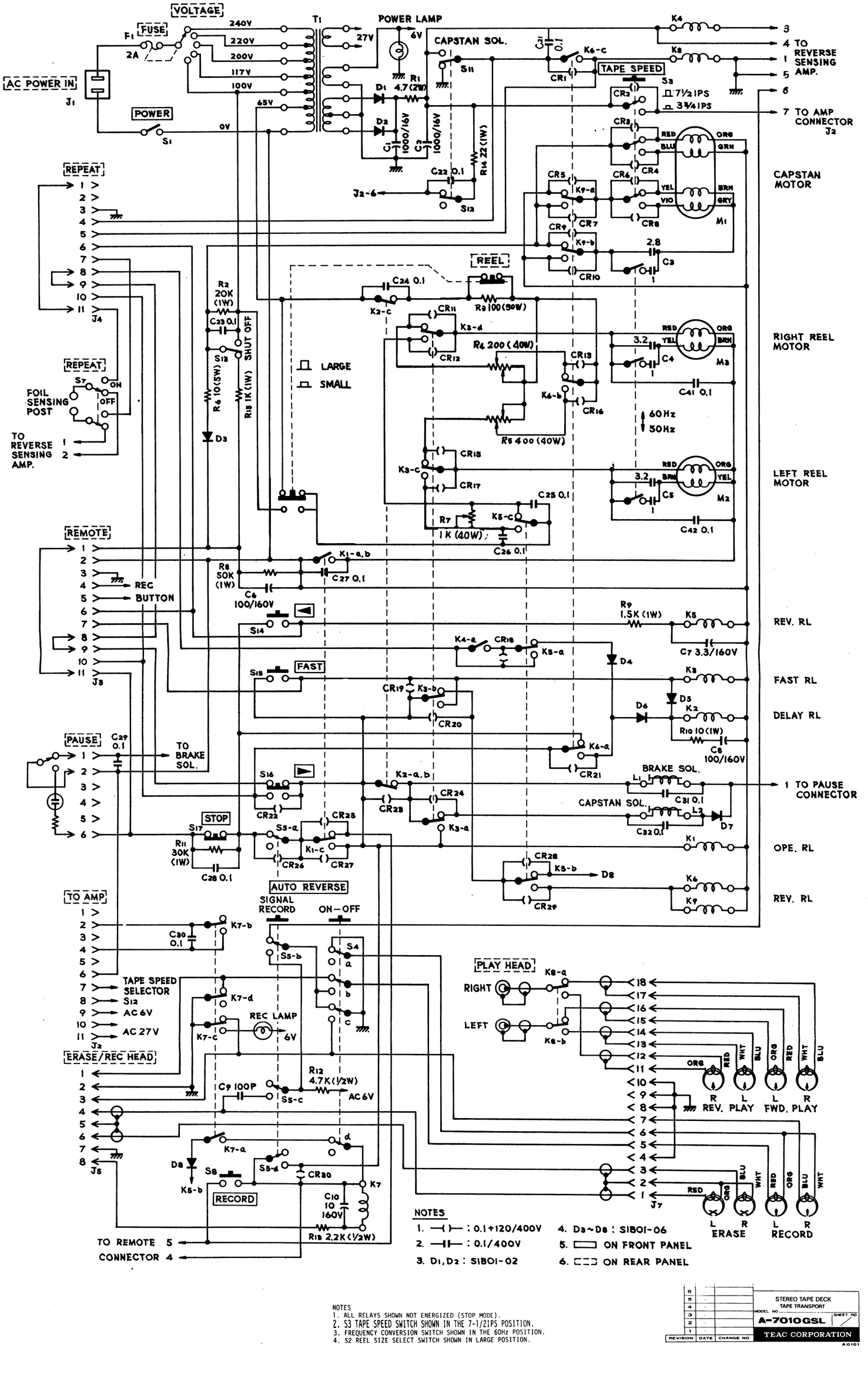
SIMPLIFIER CIRCUIT DIAGRAM
SIGNAL LEVEL AND DC VOLTAGE CHART



SCHEMATIC DIAGRAM
A-7010GSL

PS AMPLIFIER





NOTES

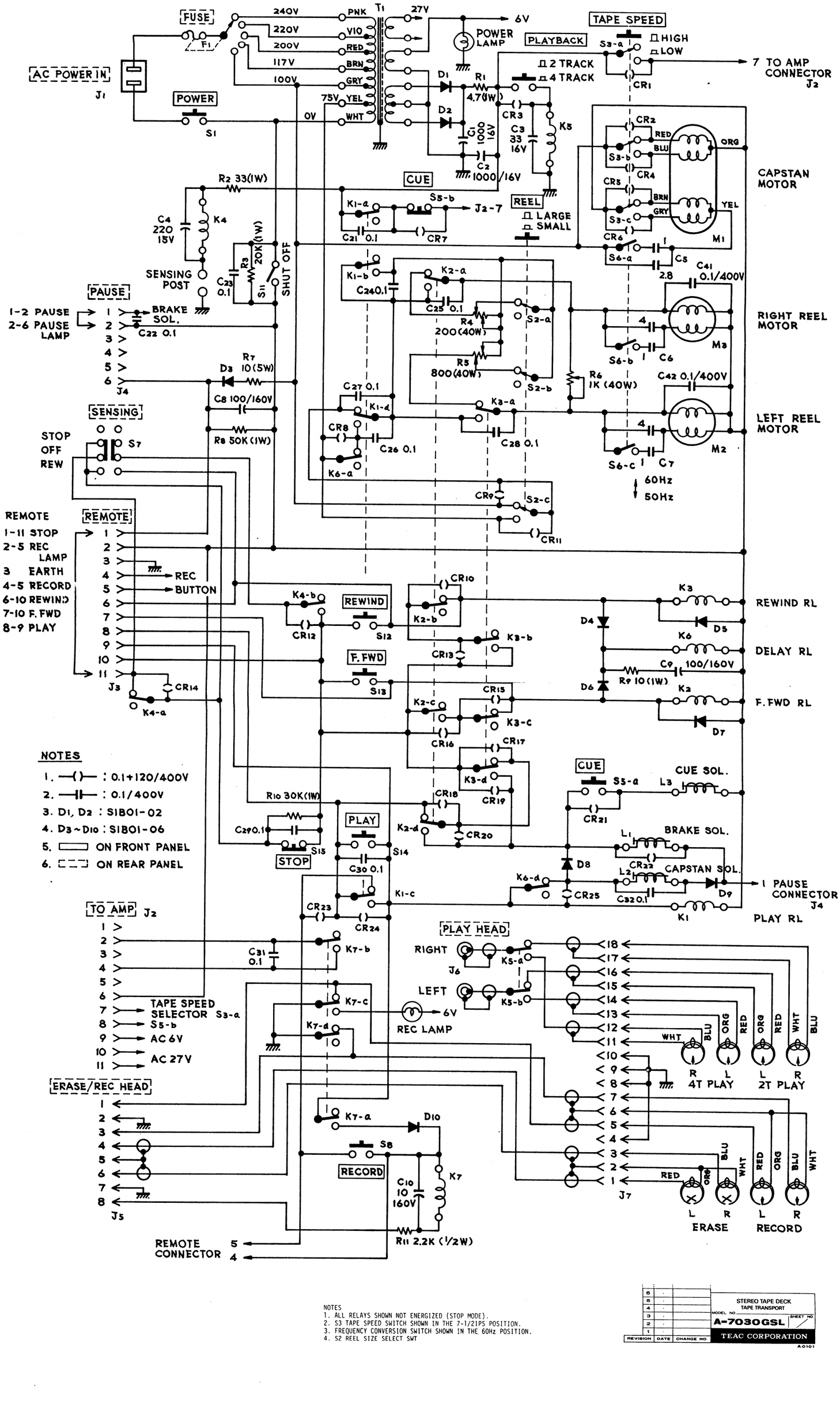
1. —( )— : 0.1+120/400V
2. —|| — : 0.1/400V
3. D1, D2 : SIB01-02
4. D3~D8 : SIB01-06
5. ▭ ON FRONT PANEL
6. ▭▭ ON REAR PANEL

NOTES
1. ALL RELAYS SHOWN NOT ENERGIZED (STOP MODE).
2. S3 TAPE SPEED SWITCH SHOWN IN THE 7-1/2IPS POSITION.
3. FREQUENCY CONVERSION SWITCH SHOWN IN THE 60Hz POSITION.
4. S2 REEL SIZE SELECT SWITCH SHOWN IN LARGE POSITION.

REVISION	DATE	CHANGE NO
6		
5		
4		
3		
2		
1		

STEREO TAPE DECK
TAPE TRANSPORT
MODEL NO. A-7010GSL
SHEET NO
TEAC CORPORATION
A0101

SCHEMATIC DIAGRAM
A-7010GSL



NOTES

1. —( )— : 0.1+120/400V
2. —|| — : 0.1/400V
3. D1, D2 : S1B01-02
4. D3 ~ D10 : S1B01-06
5. ▭ ON FRONT PANEL
6. ▭ ON REAR PANEL

NOTES
1. ALL RELAYS SHOWN NOT ENERGIZED (STOP MODE).
2. S3 TAPE SPEED SWITCH SHOWN IN THE 7-1/2IPS POSITION.
3. FREQUENCY CONVERSION SWITCH SHOWN IN THE 60Hz POSITION.
4. S2 REEL SIZE SELECT SWT

REVISION	DATE	CHANGE NO.
6		
5		
4		
3		
2		
1		

STEREO TAPE DECK
TAPE TRANSPORT
MODEL NO. A-7030GSL
SHEET NO.
TEAC CORPORATION
A0101

SCHEMATIC DIAGRAM
A-7030GSL

PREAMPLIFIER

SCHEMATIC DIAGRAM
A-7010GSL/A-7030GSL

PLAY EQ	A-7030GSL 7030GSL	A-6010GSL 6010GSL A-7010GSL 7010GSL
R111, R211	120KΩ	150KΩ
R109, R209	560Ω	470Ω
R145, R245	1KΩ	2.2KΩ
C110, C210	820PF	0.0027μF
C109, C209	0.022μF	0.022μF
C152, C252	0.01μF	0.0047μF
VR101, VR201	2.2KΩ(B)	4.7KΩ(B)
VR201, VR202	2.2KΩ(B)	6.8KΩ(B)

REC EQ CAP.	A-7030GSL 7030GSL	A-6010GSL 6010GSL A-7010GSL 7010GSL
C140, C240	0.0047μF	0.015μF
C141, C241	0.015μF	0.033μF

NOTES
1. SCHEMATIC DIAGRAM SHOWN IN THE PLAYBACK MODE.
2. MONITOR SWITCH SHOWN IN THE TAPE POSITION.
3. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTOR VALUES IN OHMS, 1/4 WATT,
   k = 1,000 OHMS
   ALL CAPACITOR VALUES IN MICROFARADS.

IC101/201 IC102/202 IC103/203

CIRCUIT REF NO.	DESCRIPTION
Q101, Q201	2SC1000 BL
Q102, Q202	2SA572 YL4
Q103, Q203	2SC536F
Q104, Q204	2SC693F
Q105, Q205	2SA494Y
Q106, Q206	2SC733Y OR 2SC536F
Q107, Q207	2SC733Y OR 2SC536F
Q301, Q302	2SC971
Q303	2SD235
Q304	2SC733Y
IC101, IC201	TEAC 42709
IC102, IC202	TEAC 42709
IC103, IC203	TEAC 42710

NOTE
D301~D305 : S1B01-02

MANUAL CHANGES

Change notices, recommended modifications etc. will be issued for the models in this manual, when appropriate. These changes are in loose leaf form and should be filed behind this page for convenient reference.

Important Information for Service Stations and Customers

TEAC® MANUAL CHANGE SHEET

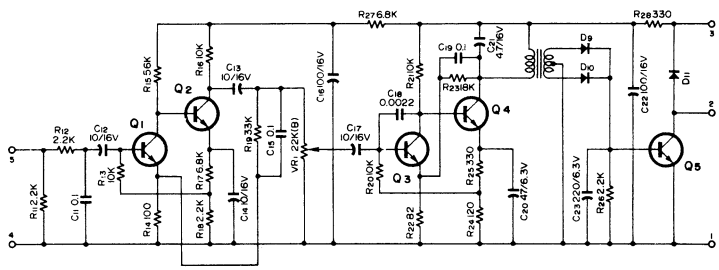
APPLICABLE SERIAL NO.
A-6010GSL, 72091 AND AFTER
A-7010GSL, 28191 AND AFTER

MODELS A-6010GSL, A-7010GSL

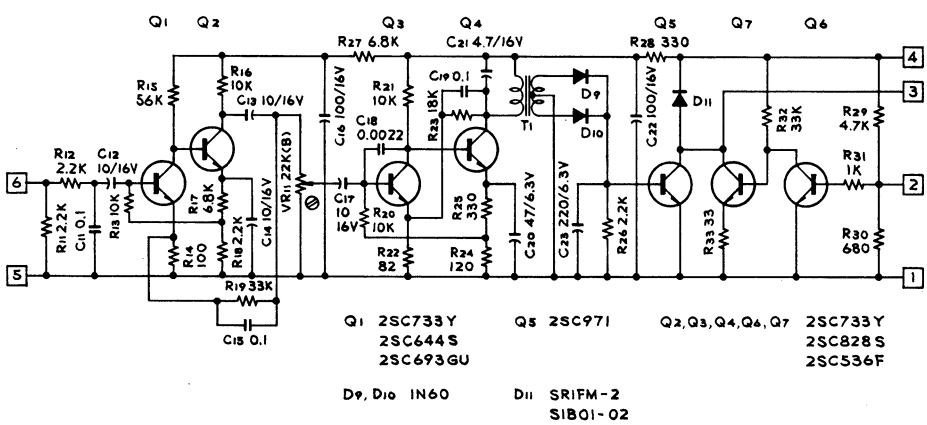
LOCATION IN SERVICE MANUAL
P.S. AMPLIFIER

P.S. AMPL. CIRCUIT CHANGE

The sensing post of the automatic reverse circuit has been the source of noise when using back-coated tapes, such as SONY SLH-BL, Scotch #206 or 207, and others. A new printed circuit board assembly is now being used to eliminate this problem. (See diagram.) If the customer desires, his older model may be modified to include this change. Order part #50491040



ORIGINAL CIRCUIT



REVISED CIRCUIT

TEAC CORPORATION

Important Information for Service

TEAC® CHANGE SHEET

REFERENCE NO. 73-02-05

APPLICABLE SERIAL NO.

A-7010GSL 28291 AND AFTER
A-7030GSL 25841 AND AFTER

MODELS A-7010GSL, A-7030GSL

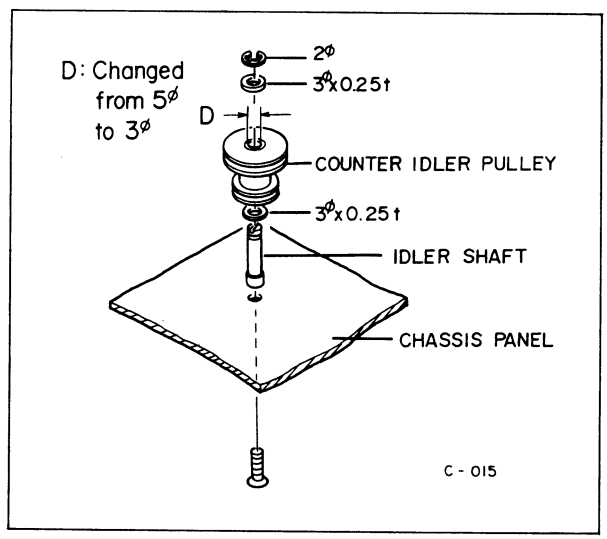
LOCATION IN SERVICE MANUAL

EXPLODED VIEW 5, BELOW THE MAIN CHASSIS

COUNTER IDLER PULLEY CHANGE

In the A-7010GSL and A-7030GSL, the problem of friction noise from the Counter Idler Pulley high-speed rotation in FAST FWD or FAST REW operation has been eliminated by a newly designed Counter Idler Pulley. The ID of the pulley's center has been reduced from 5ϕ to 3ϕ and the OD of the Idler Pulley Shaft has likewise been reduced to 3ϕ.

When replacing either the Idler Pulley Shaft or the Counter Idler Pulley, they must both be replaced at the same time, due to the incompatibility between the old and new diameters. This applies especially to the older models (before this change was incorporated) and it is also a good practice to replace both parts during any replacement to provide uniform wear characteristics between the parts.



Partial View of BELOW THE MAIN CHASSIS

		TEAC PARTS NO.	
REF.NO.	DESCRIPTION	OLD	NEW
5-28	Pulley, Counter Idler	50124280	50125800
5-29	Shaft, Idler Pulley	50152580	50125830

F-295

TEAC CORPORATION